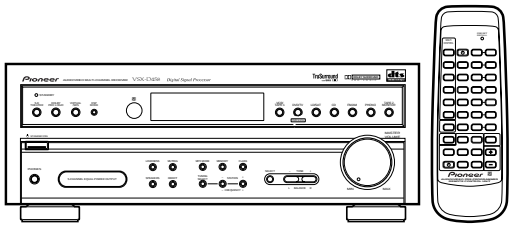
Service Manual



ORDER NO.
RRV2079

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D458

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	VSX-D458		
KUXJI	◯	AC120V	
KCXJI	◯	AC120V	

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T – ZZK DEC. 1998 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

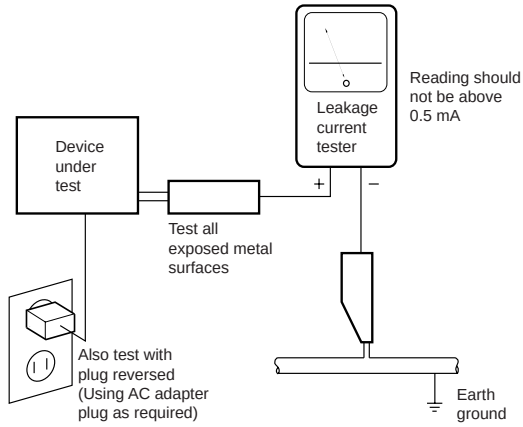
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

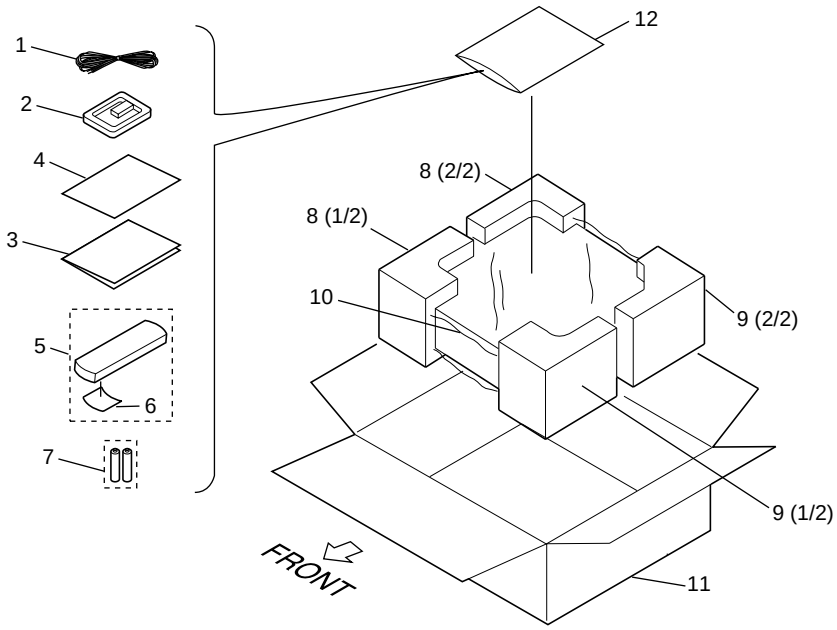
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

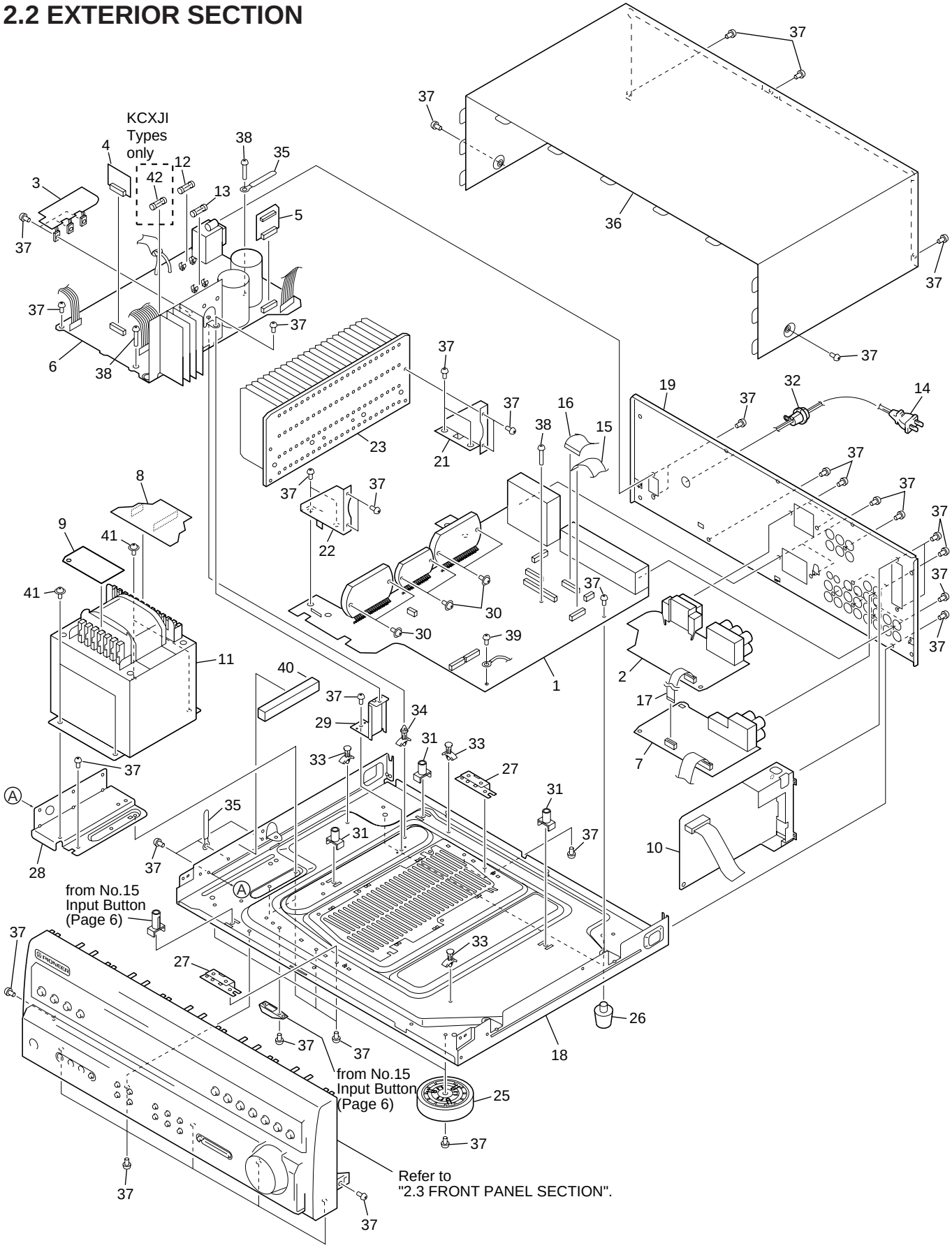
Mark	No.	Description	Part No.
	1	FM Antenna	ADH7004
	2	AM Loop Antenna	ATB7009
	3	Operating Instructions	See Contrast table (2)
NSP	4	Warranty Card	See Contrast table (2)
	5	Remote Control Unit (CU-VSX153)	AXD7207
	6	Battery Cover	RZN1156
NSP	7	Dry Cell Battery(R6P, AA)	VEM-013
	8	Left Pad	AHA7201
	9	Right Pad	AHA7202
	10	Packing Sheet	AHG7010
	11	Packing Case	AHD7730
	12	Polyethylene Bag (0.03×230×340)	Z21-038

(2) CONTRAST TABLE

VSX-D458/KUXJI and KCXJI are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			VSX-D458 /KUXJI	VSX-D458 /KCXJI	
	3	Operating Instructions (English)	ARB7178	Not used	
	3	Operating Instructions (English/French)	Not used	ARE7202	
NSP	4	Warranty Card	ARY7023	ARY7024	

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

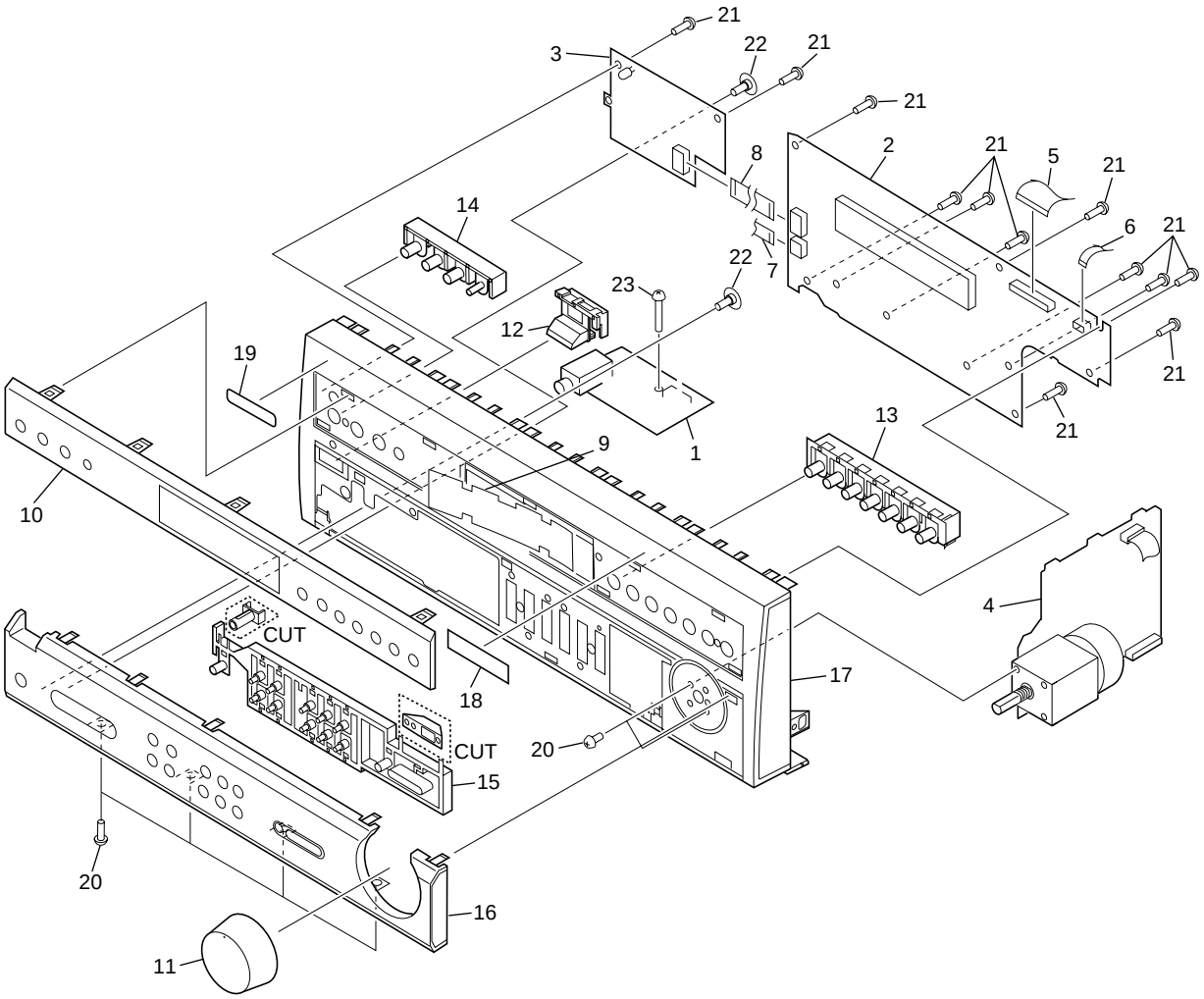
Mark	No.	Description	Part No.
	1	INPUT Assy	AWX7091
	2	R/C SP & 6CH Assy	AWX7092
	3	REG Assy	AWX7093
NSP	4	REG CONNECTION Assy	AWX7157
NSP	5	PS CONNECTION Assy	AWX7158
	6	POWER SUPPLY Assy	See Contrast table (2)
	7	VIDEO Assy	AWX7098
	8	TRANS Assy	AWX7099
	9	PRIMARY Assy	AWX7160
	10	FM/AM TUNER Unit	AXX7046
⚠	11	Power Transformer (T1 : AC120V)	See Contrast table (2)
⚠	12	Fuse (FU2 : 6.3A)	VEK1026
⚠	13	Fuse (FU1 : 10A)	REK1087
⚠	14	AC Power Cord	PDG1064
	15	Flat Flexible Cable (13P)	ADD7086
	16	Flat Flexible Cable (22P)	ADD7087
	17	Flat Flexible Cable (12P)	ADD7090
NSP	18	Under Base	ANA7066
	19	Rear Panel	See Contrast table (2)
	20	.....	
	21	Heat Sink 45 Holder R	ANG7174
	22	Heat Sink 45 Holder F	ANG7175
NSP	23	Heat Sink 45	ANH7070
	24	.....	
	25	Insulator	AMR7198
	26	Foot Assy	REC1263
	27	Heat Sink 45 Holder B	ANG7176
	28	Trans Frame	ANG7183
	29	Heat Sink S 45 Holder	ANG7185
	30	Screw	ABA7043
	31	PCB Mold	AMR2533
	32	Cord Stopper	CM-22C
NSP	33	Card Spacer	DEC1770
NSP	34	PCB Holder	PNW2100
NSP	35	Binder	RNE1277
	36	Bonnet Case	AZN7711
	37	Screw	BBZ30P080FZK
	38	Screw	BBZ30P200FMC
	39	Screw	BBZ30P080FMC
	40	Spacer	AEB7118
	41	Screw	ABA7044
⚠	42	Fuse (FU4 : 10A)	See Contrast table (2)

(2) CONTRAST TABLE

VSX-D458/KUXJI and KCXJI are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			VSX-D458 /KUXJI	VSX-D458 /KCXJI	
	6	POWER SUPPLY Assy	AWX7096	AWX7194	
⚠	11	Power Transformer (T1 : AC120V)	ATS7207	ATS7208	
	19	Rear Panel	ANC7795	ANC7796	
⚠	42	Fuse (FU4 : 10A)	Not used	REK1087	

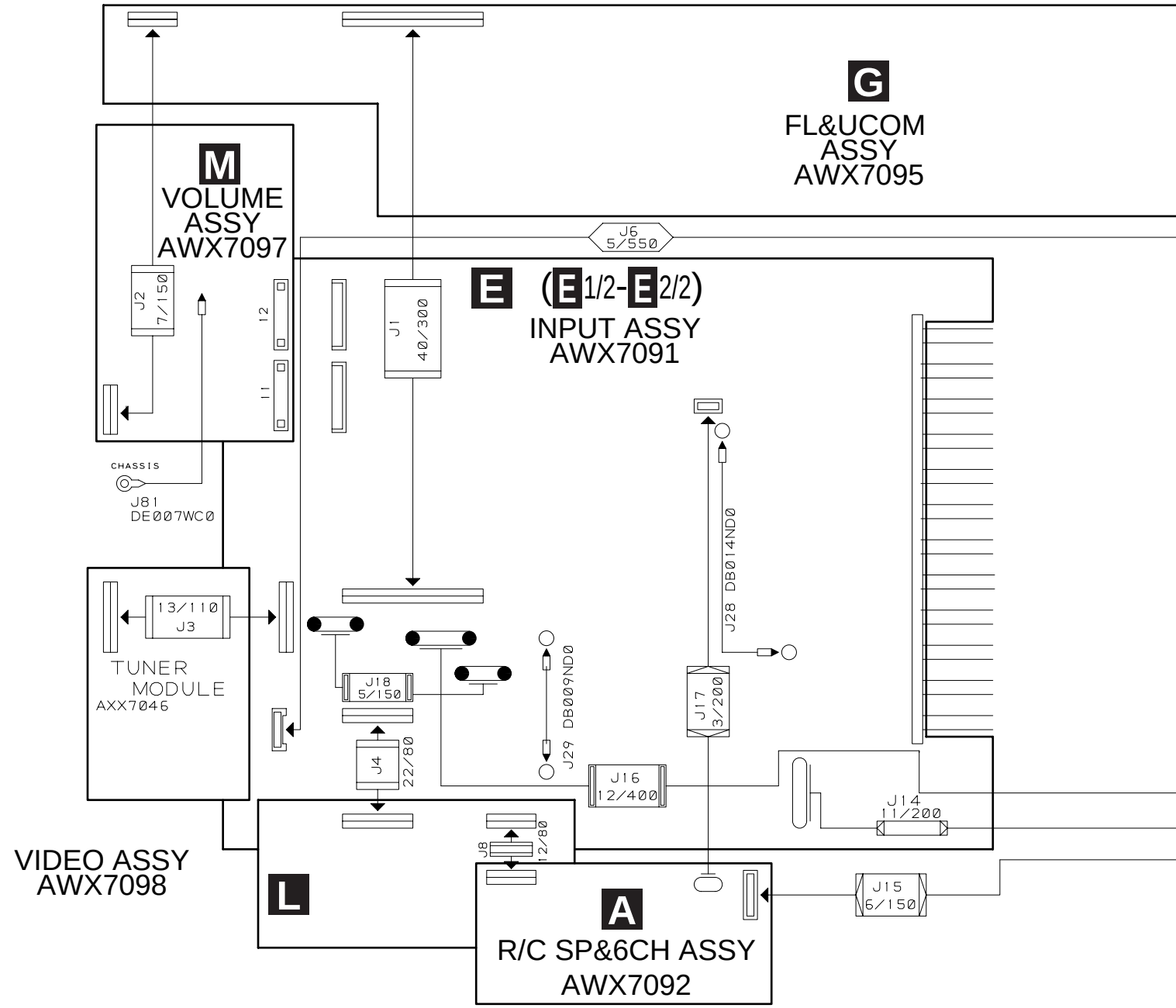
2.3 FRONT PANEL SECTION



• FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
NSP	1	HP & FAV Assy	AWX7094
	2	FL & UCOM Assy	AWX7095
	3	POWER SW Assy	AWX7100
	4	VOLUME Assy	AWX7097
	5	Flat Flexible Cable (40P)	ADD7084
	6	Flat Flexible Cable (7P)	ADD7085
	7	Flat Flexible Cable (7P)	ADD7088
	8	Flat Flexible Cable (4P)	ADD7089
	9	Fl Filter	AAK7294
	10	Fl Panel	AAK7533
	11	Round Knob L	AAB7082
	12	Power Button	AAD7325
	13	Function Button	AAD7328
	14	SFC Button	AAD7329
	15	Input Button	AAD7438
	16	Sub Panel	AAP7038
	17	Front Panel	AMB7606
NSP	18	Getter	AAX7628
	19	PIONEER Badge	PAM1776
	20	Screw	BPZ30P080FZK
	21	Screw	BPZ30P080FMC
	22	Screw	ABA7009
	23	Screw	ABA7046

3. SCHEMATIC DIAGRAM
3.1 OVERALL CONNECTIONS

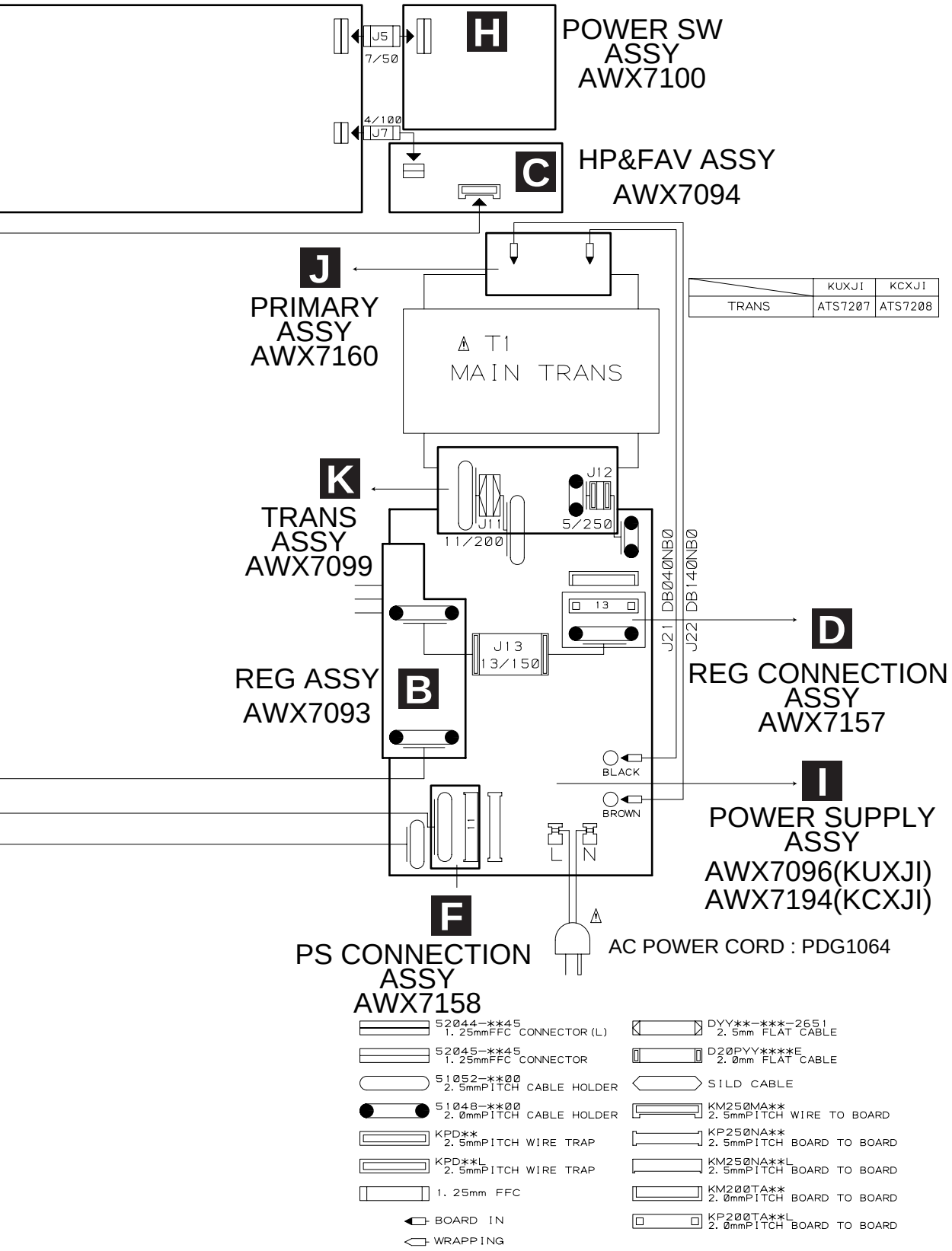


FUSE LIST ⚠

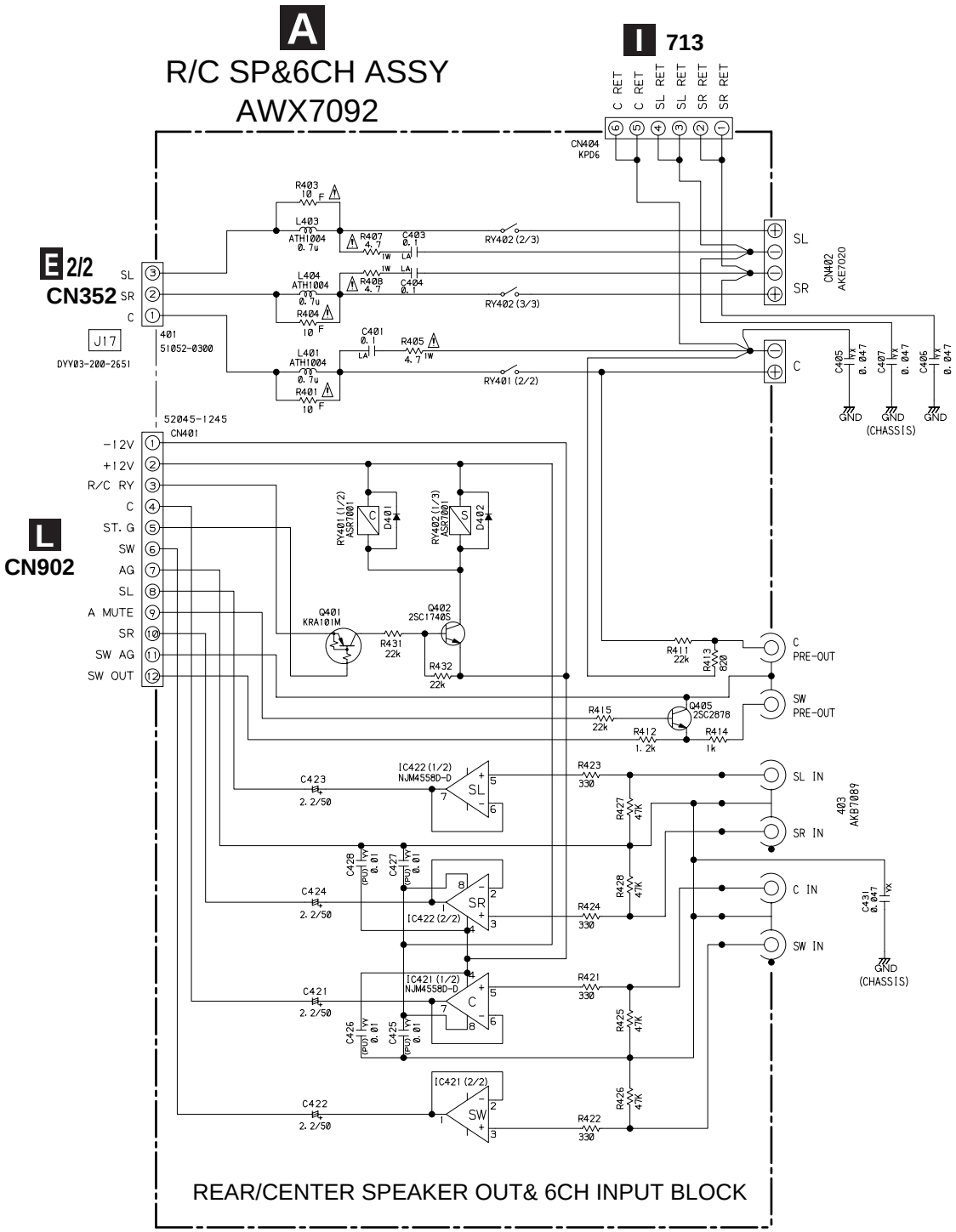
	VSX - D458	
	KUXJI	KCXJI
FU 1	10A (REK1087)	
FU 2	6.3A (VEK1026)	
FU 4	———	10A (REK1087)

The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

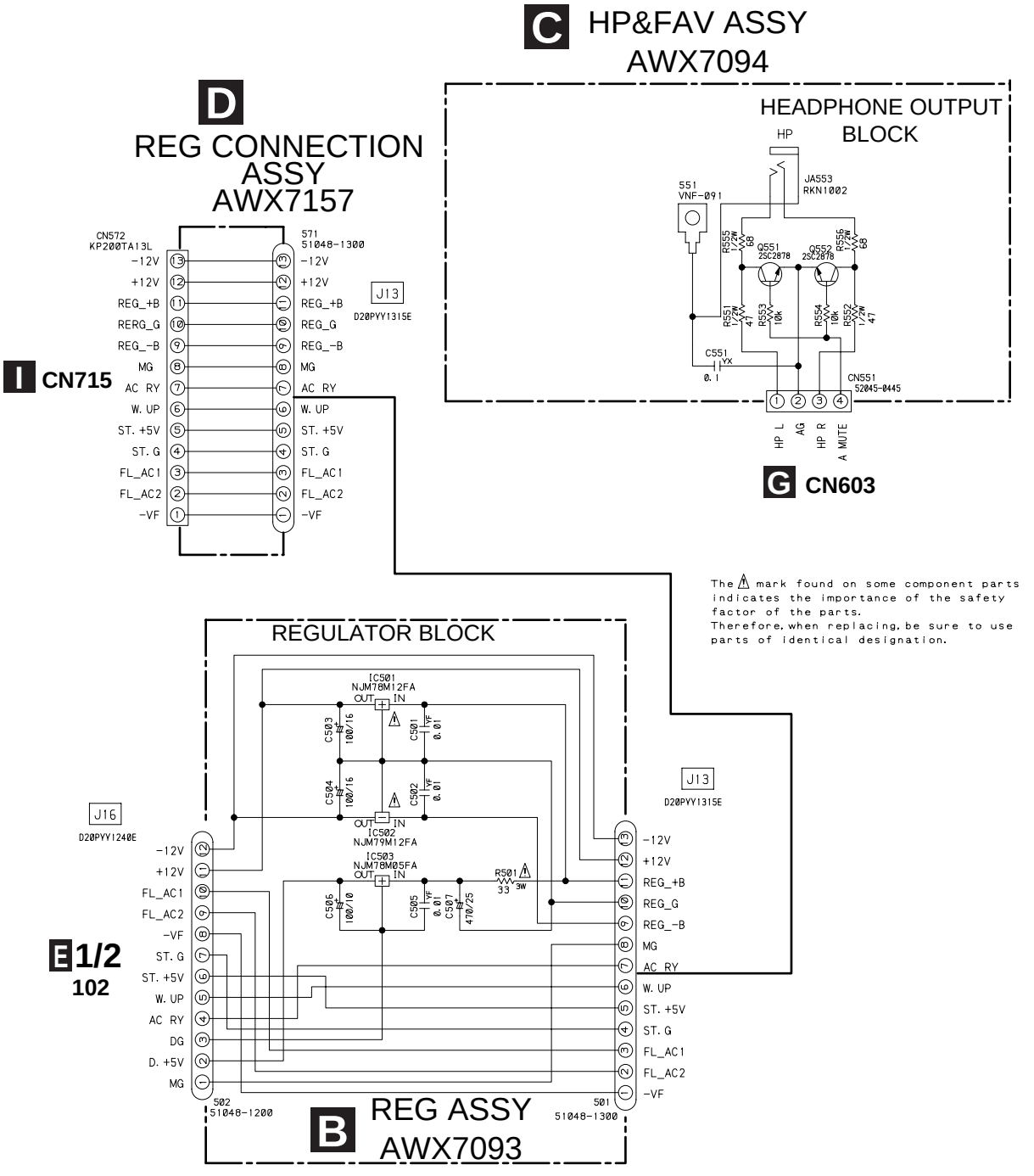
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



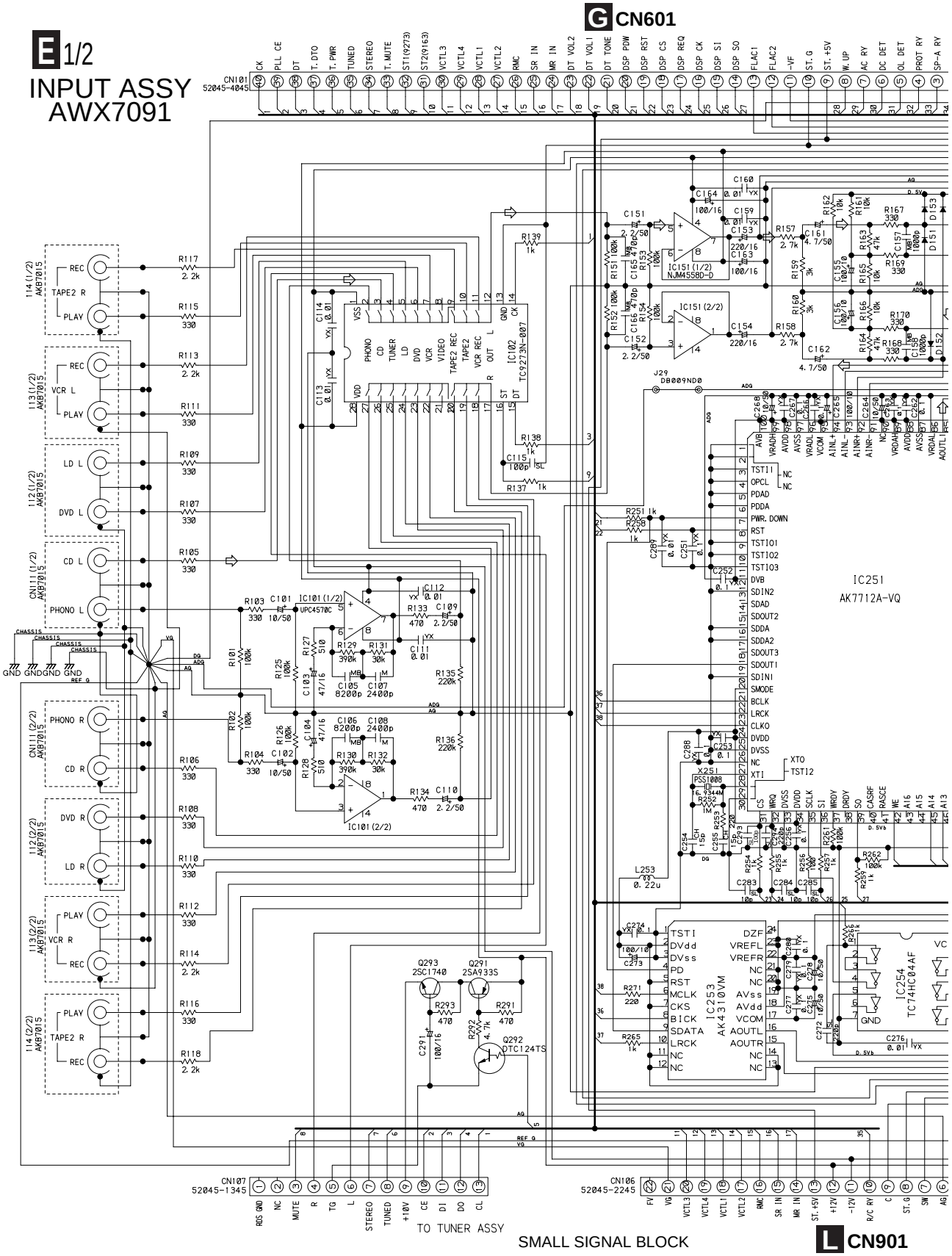
3.2 R/C SP&6CH ASSY

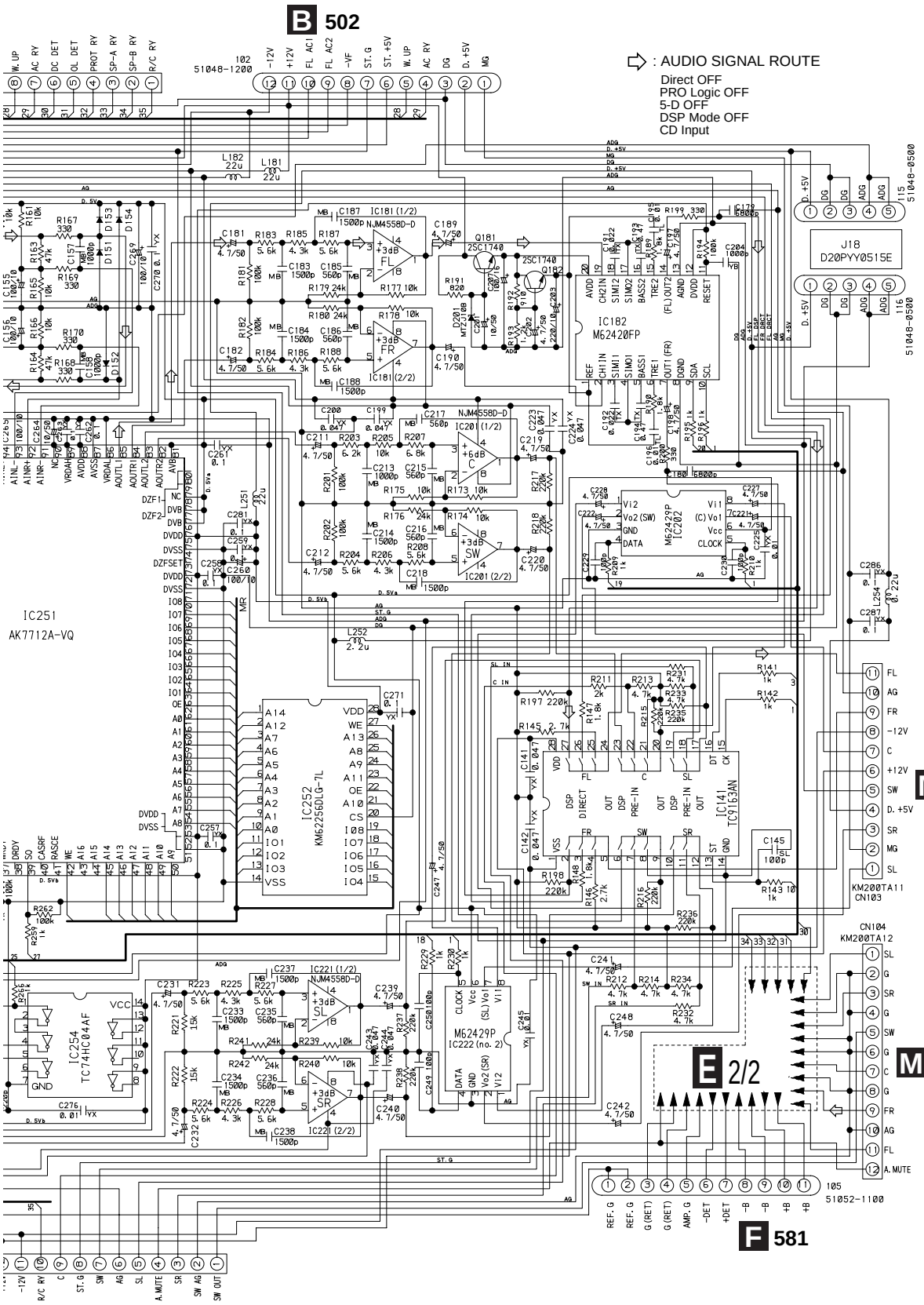


3.3 REG, HP&FAV AND REG CONNECTION ASSEMBLIES

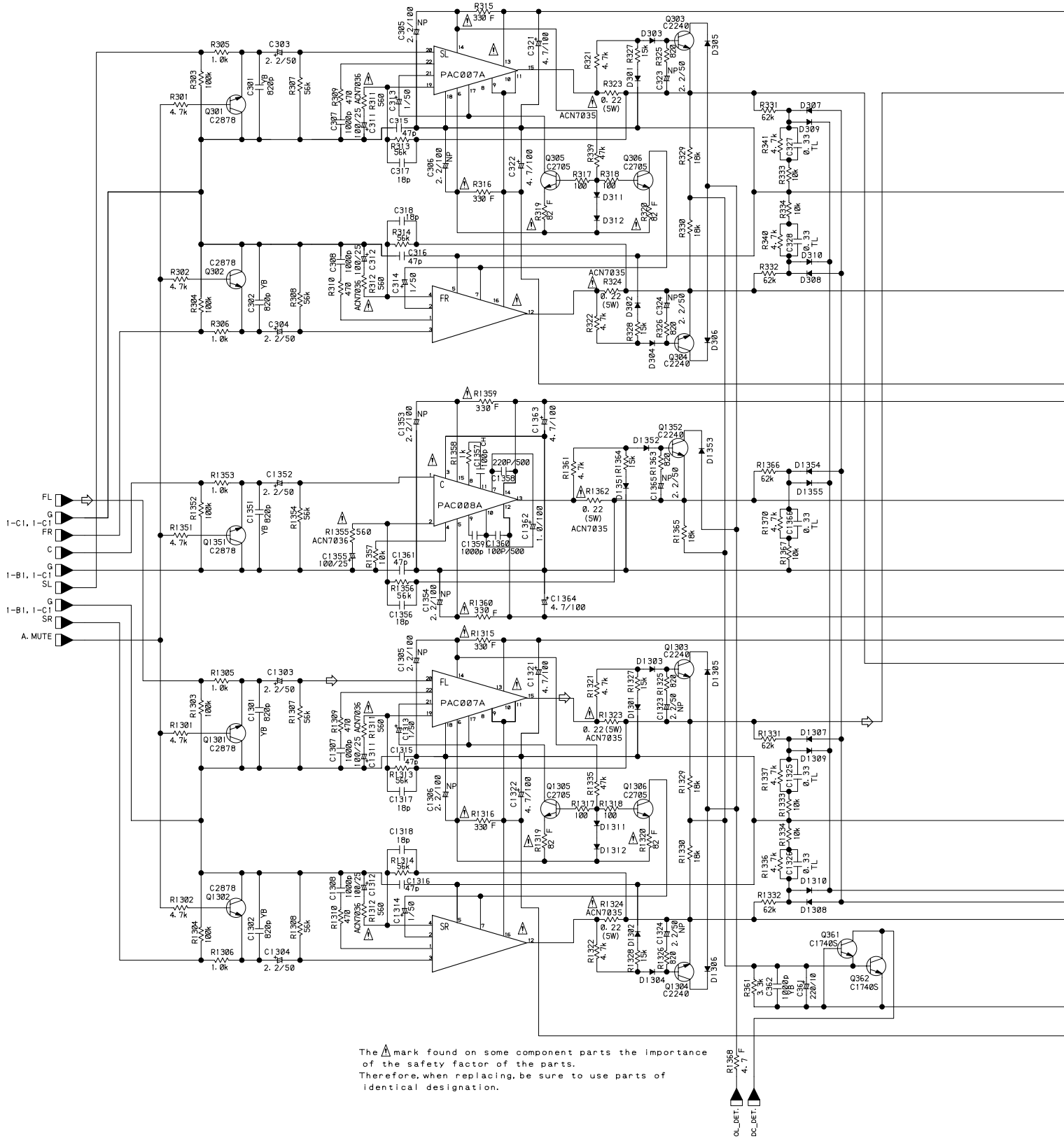


3.4 INPUT ASSY(1/2)

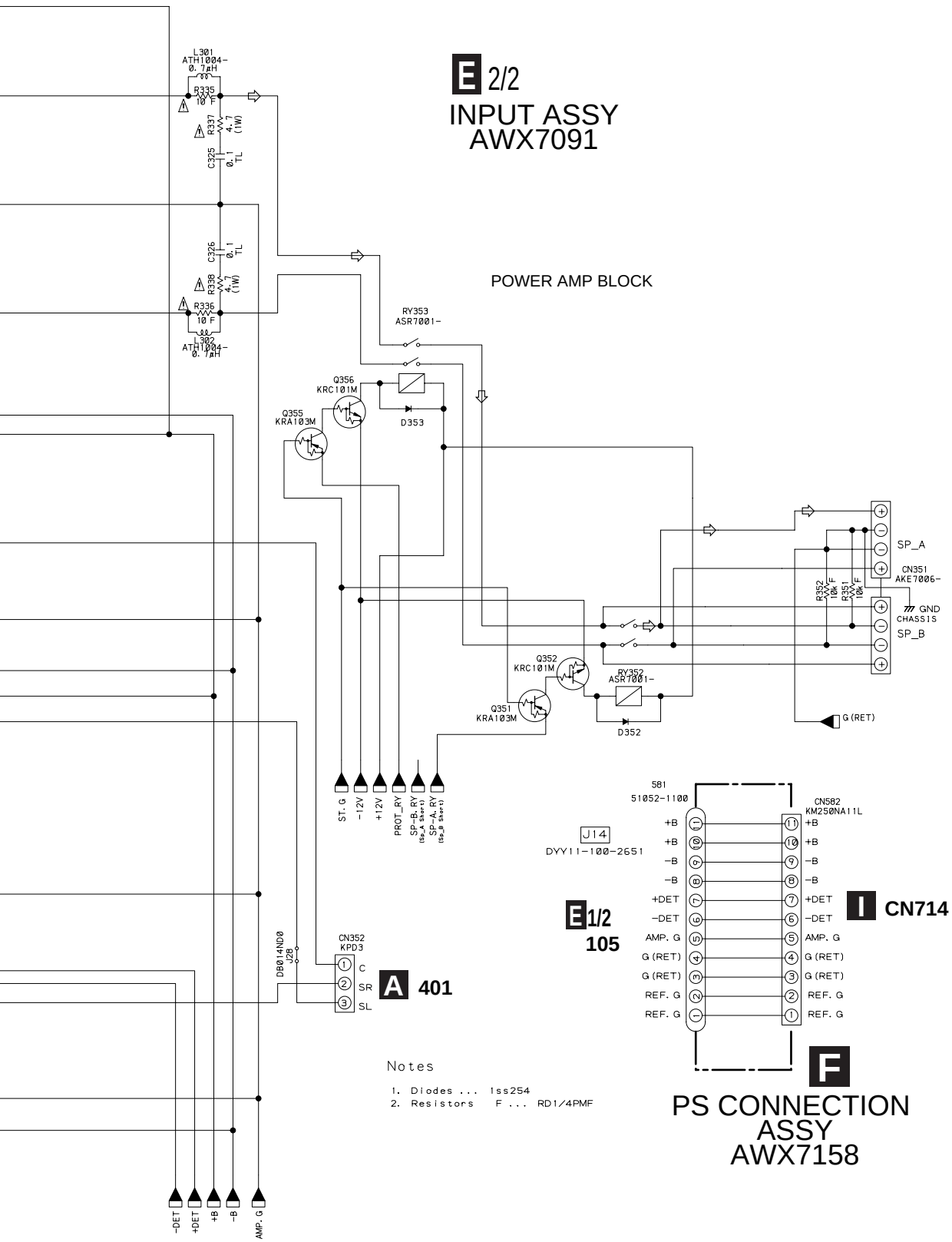



B 502
: AUDIO SIGNAL ROUTE
Direct OFF
PRO Logic OFF
5-D OFF
DSP Mode OFF
CD Input
IC182 M62420FP
IC251 AK7712A-VQ
IC252 KM62256DLG-7L
IC254 TC74HC04AF
IC141 TC9163AN
IC202 M62429P
IC222 M62429P
M CN801
M CN802
CN103
CN104
E 2/2
F 581
CN901
E 1/2

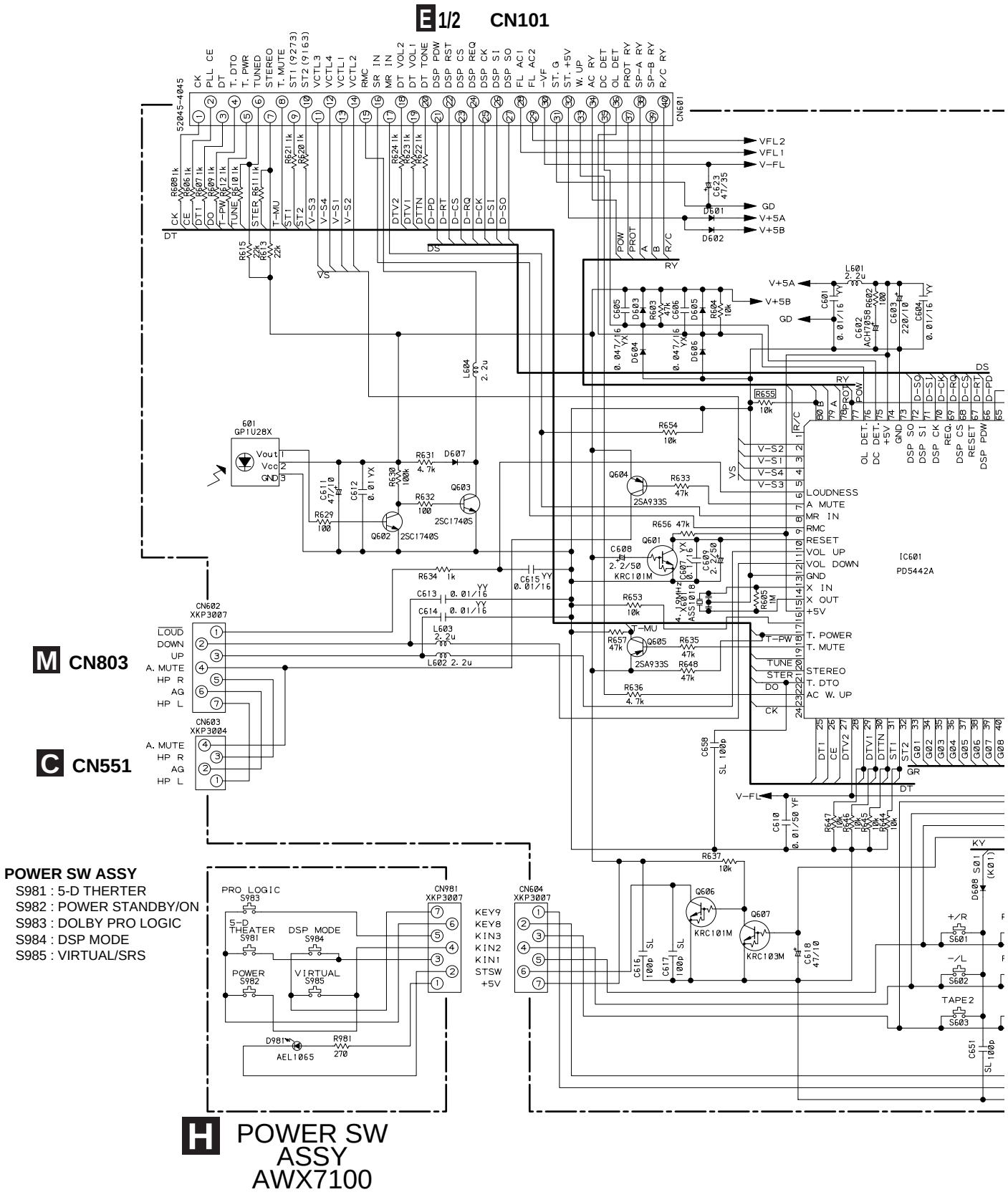
3.5 INPUT ASSY(2/2) AND PS CONNECTION ASSY

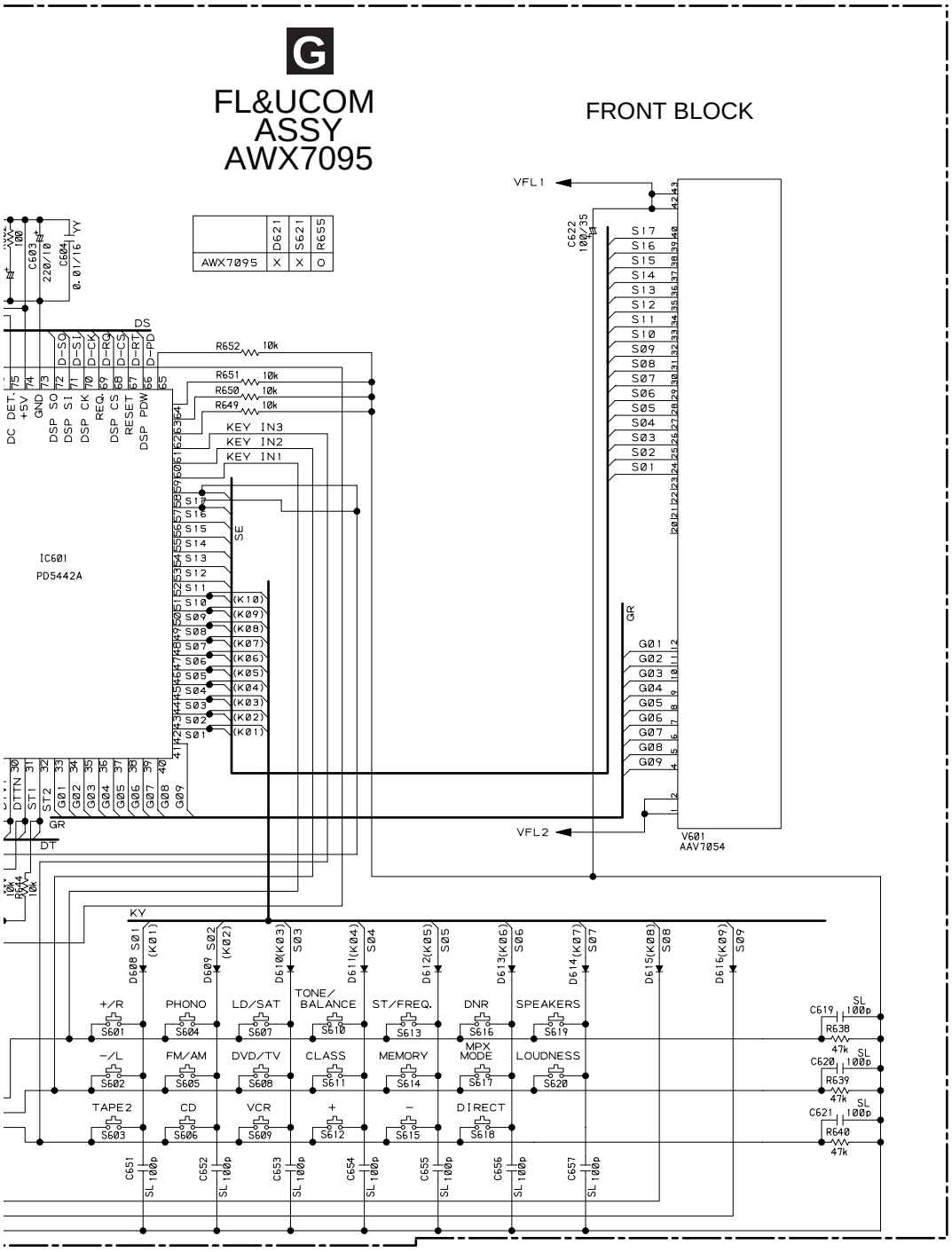


The ⚠ mark found on some component parts the importance of the safety factor of the parts.
Therefore, when replacing, be sure to use parts of identical designation.


E 2/2
INPUT ASSY
AWX7091
POWER AMP BLOCK
L301
ATH1004-
0.7mH
R335
10 F
R337
4.7
(1W)
C325
0.1
TL
C326
0.1
TL
R338
4.7
(1W)
R336
10 F
L302
ATH1004-
0.7mH
RY353
ASR7001-
Q356
KRC101M
Q355
KRA103M
D353
SP_A
CN351
AKE7006-
R352
10k
R351
10k
GND
CHASSIS
SP_B
Q352
KRC101M
Q351
KRA103M
RY352
ASR7001-
D352
G (RET)
ST. G
-12V
+12V
PROT_RY
SP-B_RY
(Sp_A Short)
SP-A_RY
(Sp_B Short)
581
51052-1100
J14
DYY11-100-2651
CN582
KM250NA11L
+B
+B
-B
-B
+DET
-DET
AMP. G
G (RET)
G (RET)
REF. G
REF. G
E 1/2
105
I CN714
DB014ND0
J25
CN352
KPD3
C
SR
SL
A 401
Notes
1. Diodes ... 1ss254
2. Resistors F ... RD1/4PMF
-DET
+DET
+B
-B
AMP. G
F
PS CONNECTION
ASSY
AWX7158

3.6 FL&UCOM AND POWER SW ASSEMBLIES

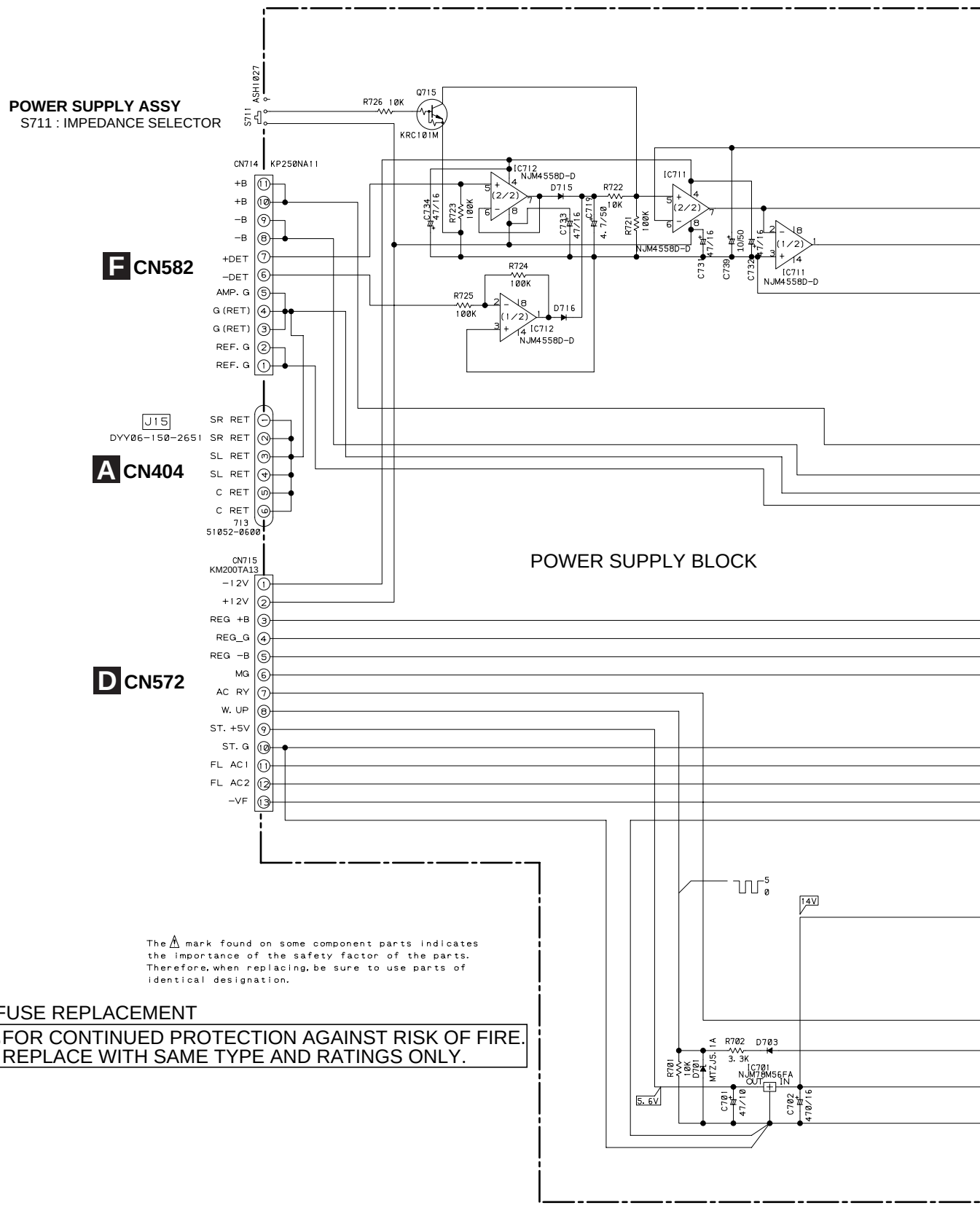




FL&UCOM ASSY

S601 : TONE/BALANCE +/R
S602 : TONE/BALANCE –/L
S603 : TAPE2 MONITOR
S604 : PHONO
S605 : FM/AM
S606 : CD
S607 : LD/SAT
S608 : DVD/TV
S609 : VCR/TAPE1
S610 : TONE/BALANCE SELECT
S611 : CLASS
S612 : ST/FEQ. –
S613 : ST/FEQ. TUNING SELECT
S614 : MEMORY
S615 : ST/FEQ. +
S616 : MUTING
S617 : MPX MODE
S618 : DIRECT
S619 : SPEAKERS
S620 : LOUDNESS

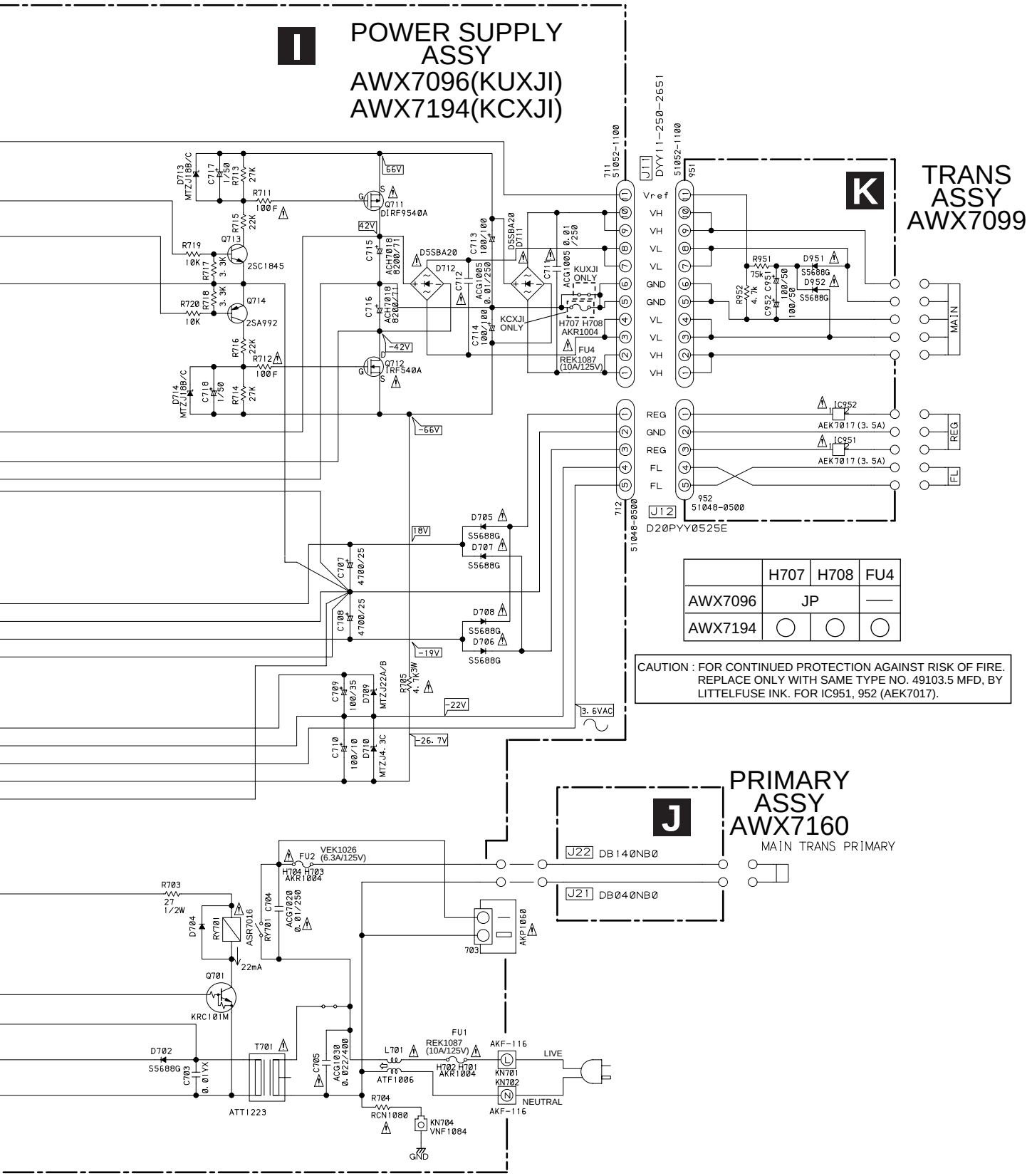
3.7 POWER SUPPLY, PRIMARY AND TRANS ASSEMBLIES



The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

• NOTE FOR FUSE REPLACEMENT

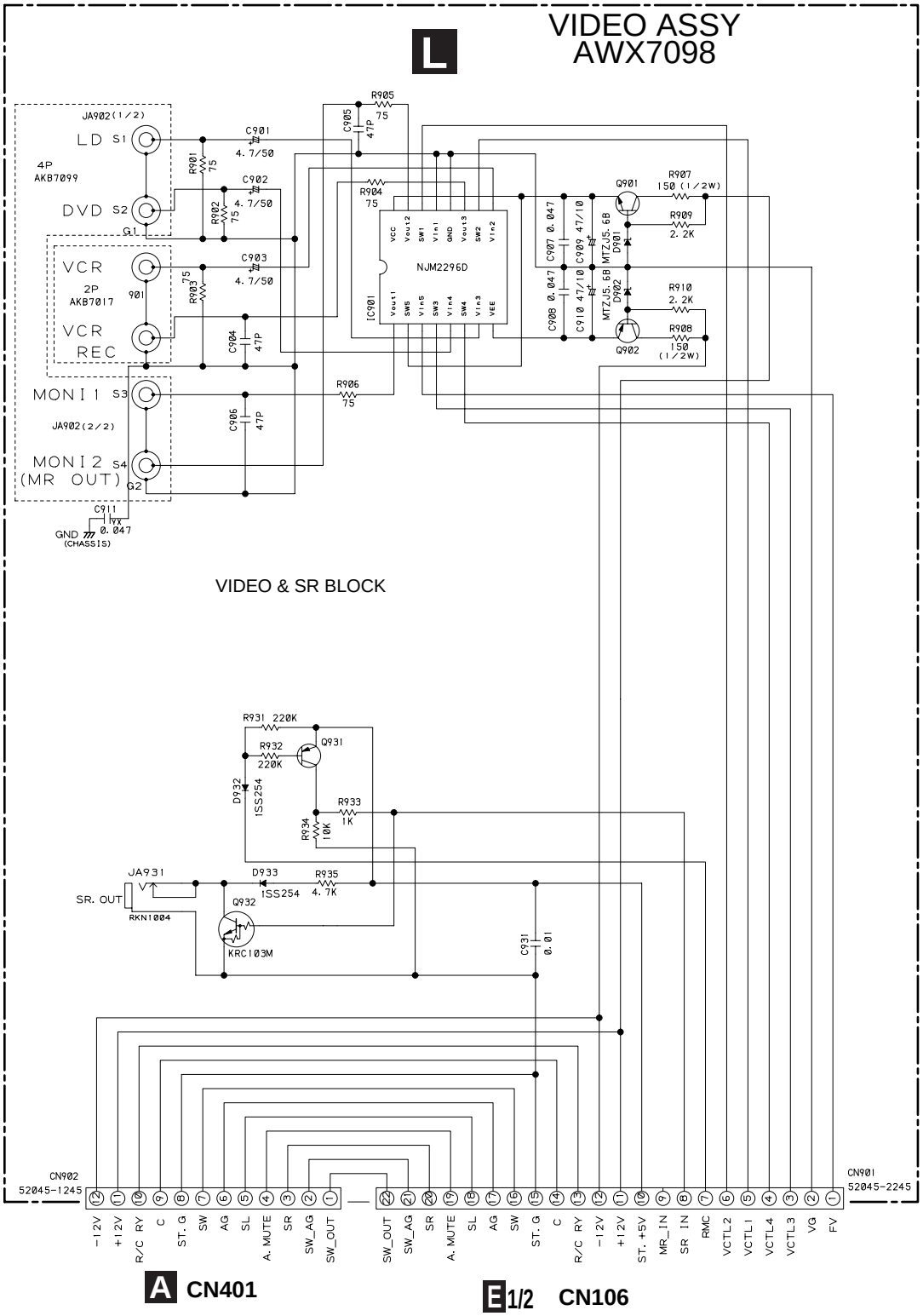
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.



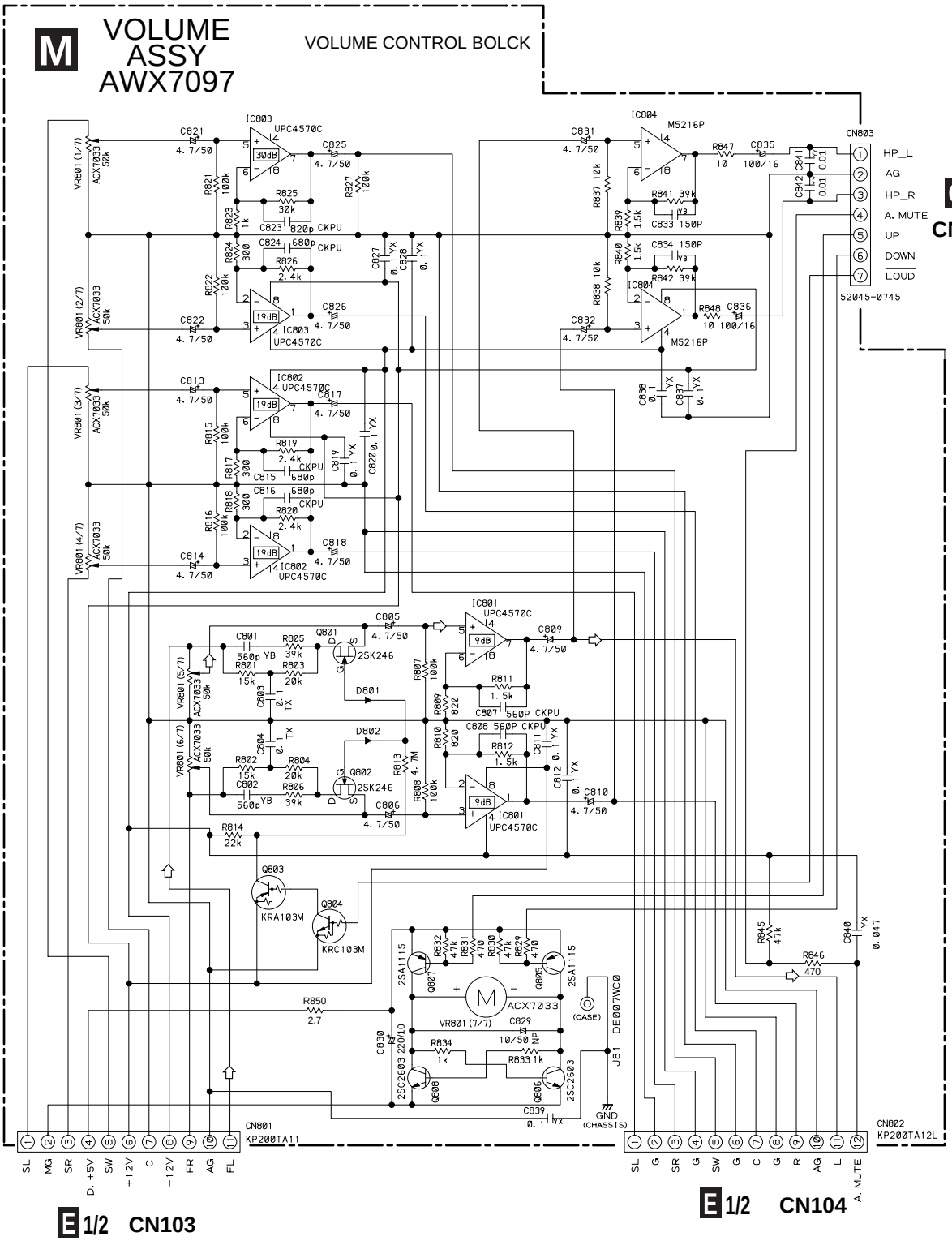
	H707	H708	FU4
AWX7096	JP		—
AWX7194	○	○	○

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 49103.5 MFD, BY LITTELFUSE INK. FOR IC951, 952 (AEK7017).

3.8 VIDEO ASSY



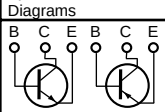
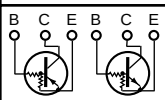
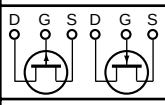
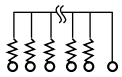
3.9 VOLUME ASSY



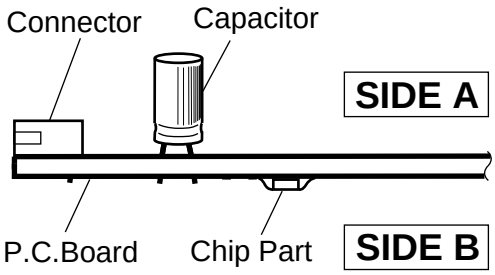
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

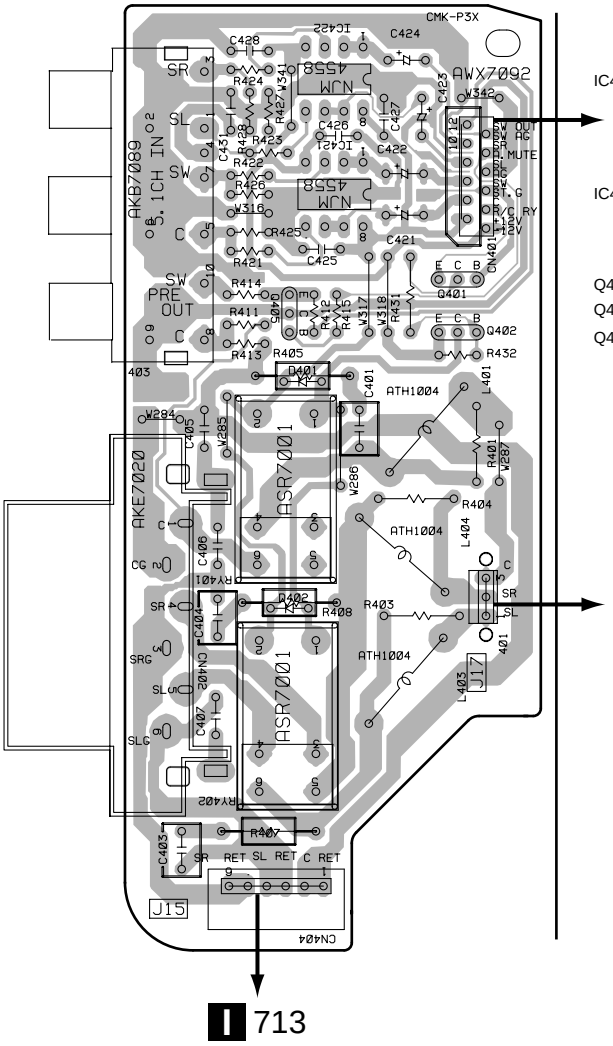


4.1 R/C SP&6CH, REG, HP&FAV AND REG CONNECTION ASSEMBLIES

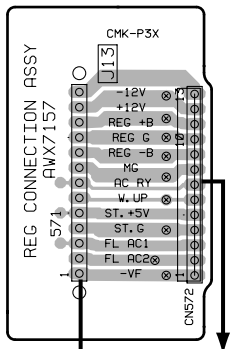
A R/C SP&6CH ASSY

(ANP7234-B)

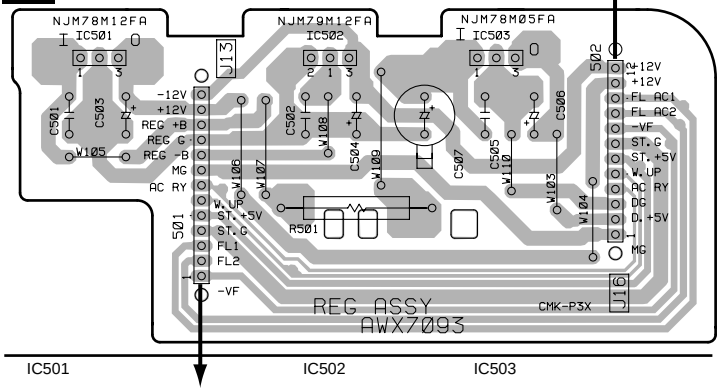
SIDE A



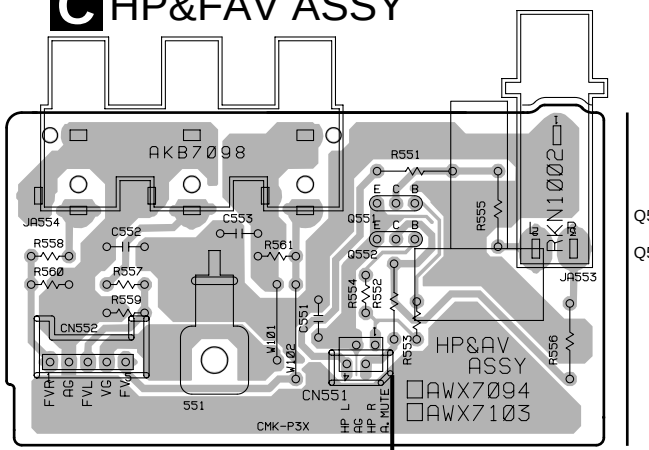
D REG CONNECTION ASSY



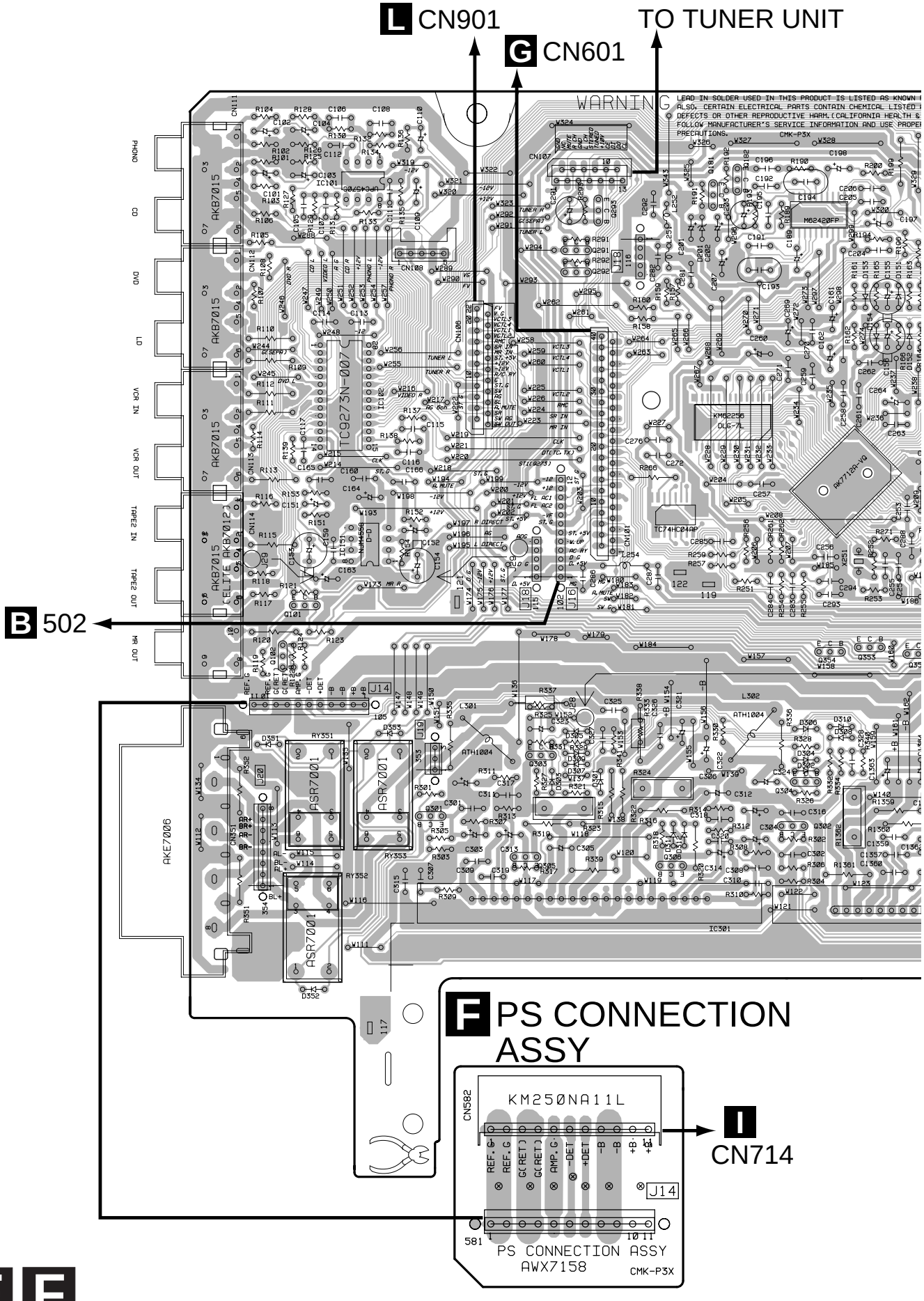
B REG ASSY



C HP&FAV ASSY

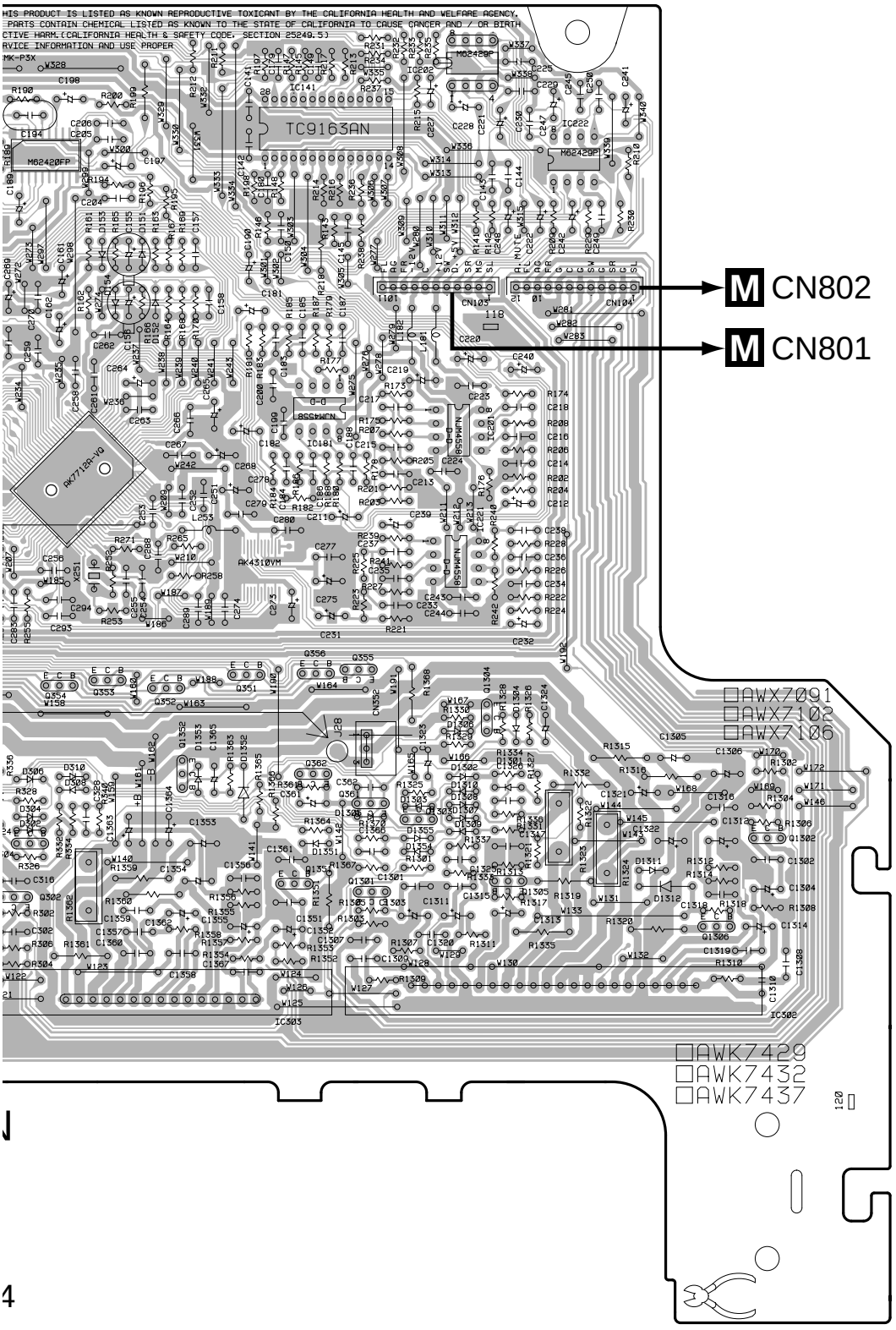


4.2 INPUT AND PS CONNECTION ASSEMBLIES



UNIT

SIDE A



IC202

IC101,Q181,Q182

IC182,IC141,IC222

Q293

Q291

Q292

IC102
IC252,IC181

IC251,IC201

IC151,IC253,IC221

Q351-356

Q102,Q1304

Q1352,Q362

Q361,Q1303

Q1302

Q303,Q1351,Q1301,Q1305

Q301,Q302,Q304,Q1306

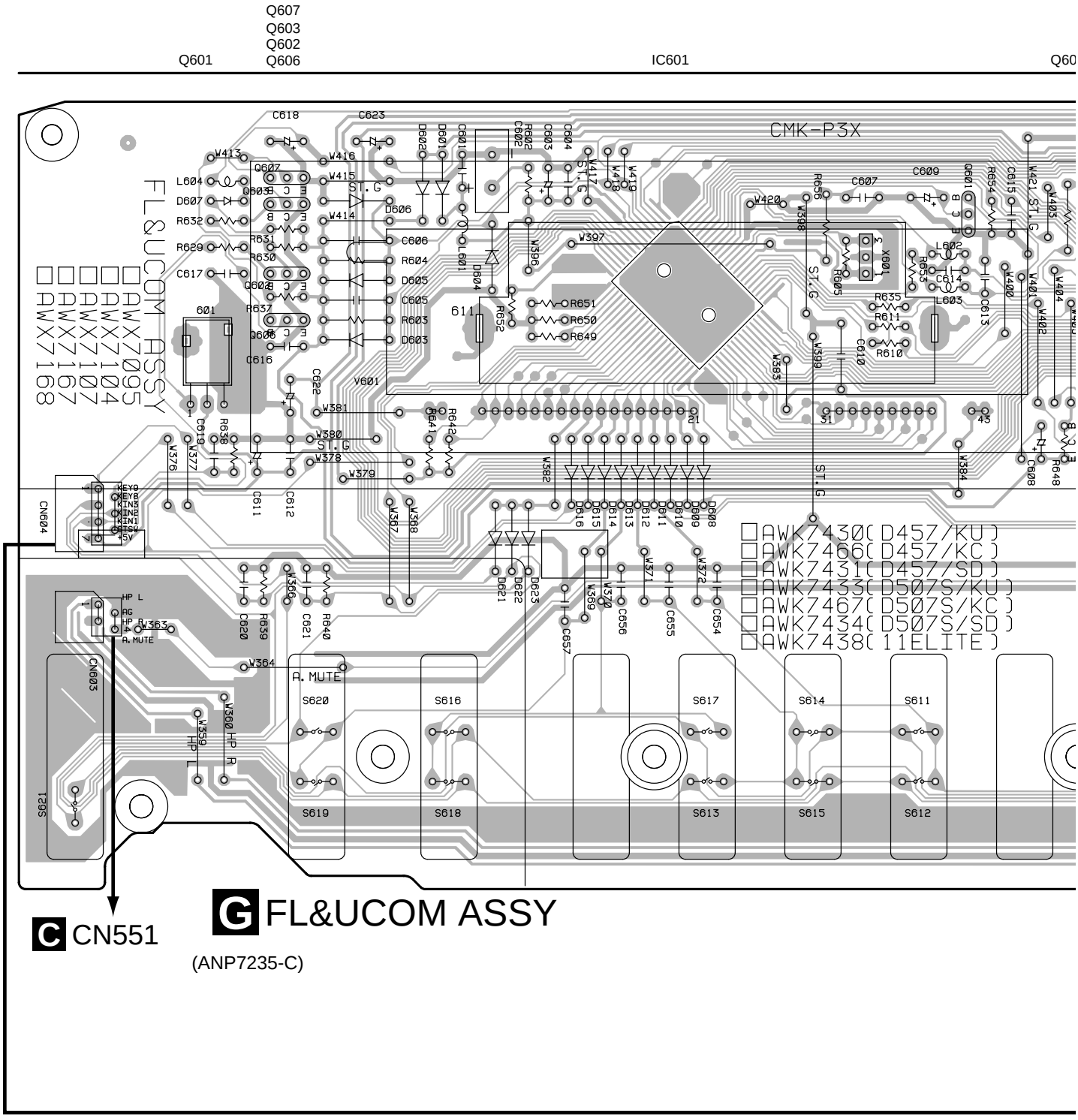
Q305,Q306

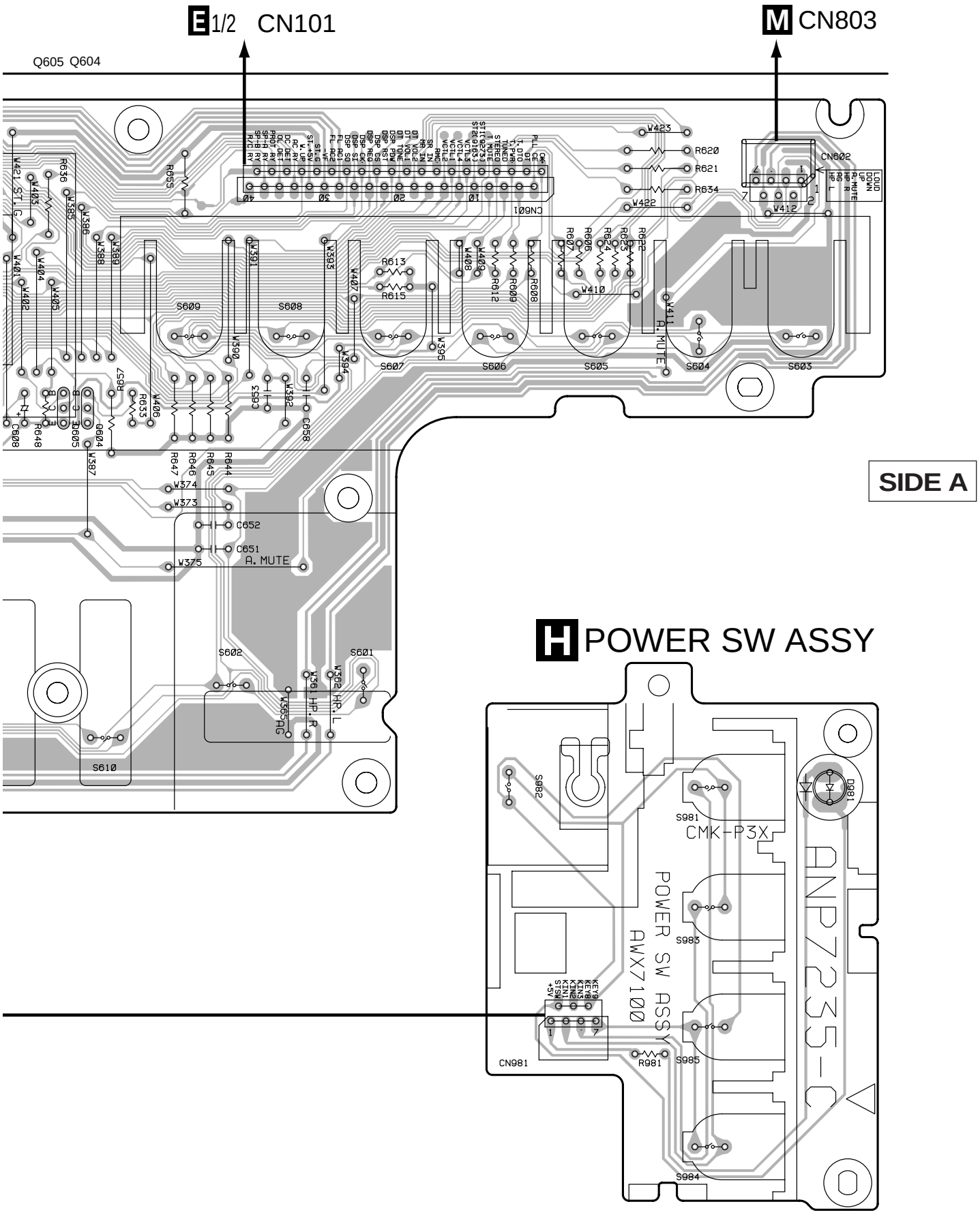
IC301,IC302

E INPUT ASSY

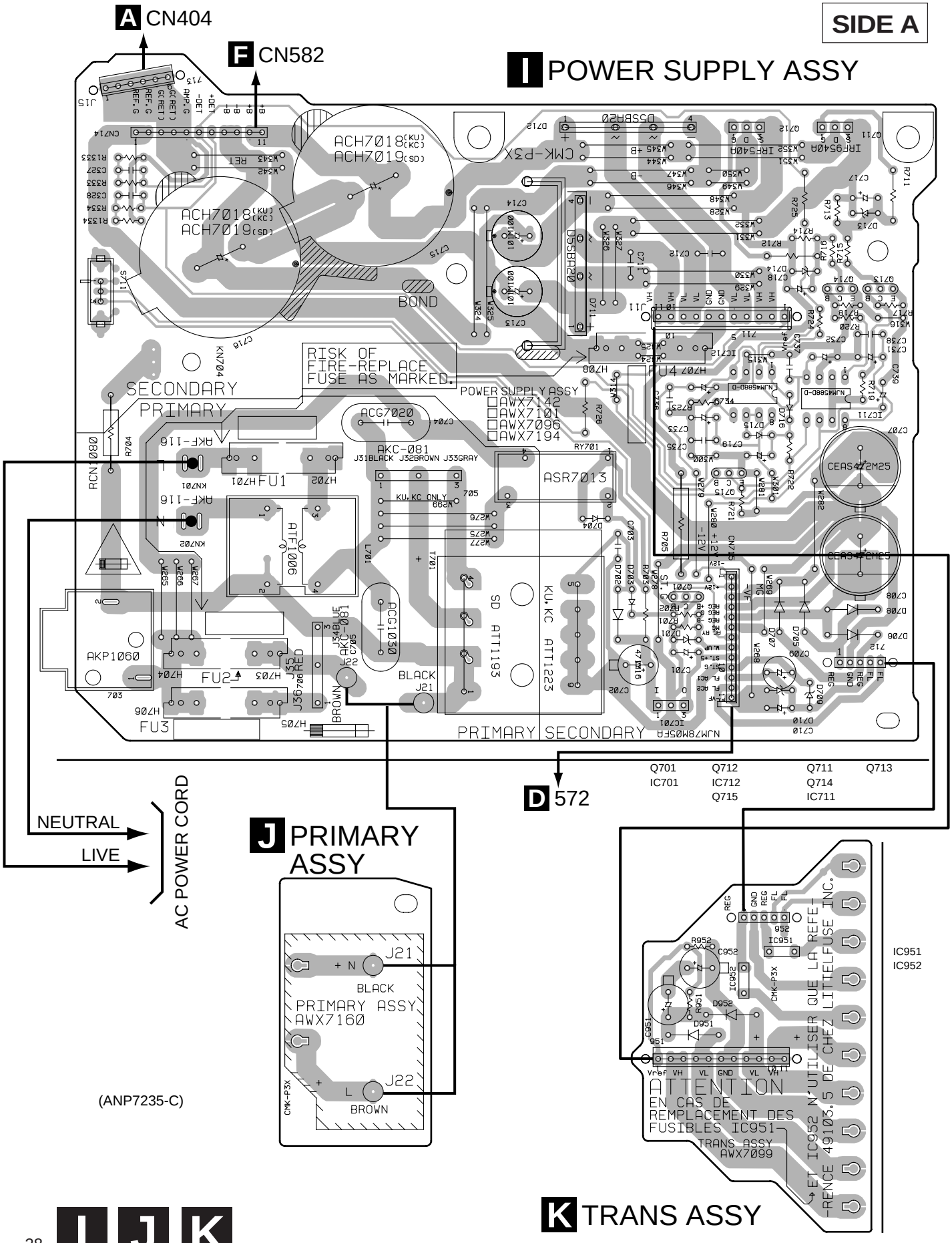
(ANP7234-B)

4.3 FL&UCOM AND POWER SW ASSEMBLIES




E 1/2 CN101
M CN803
Q605 Q604
SIDE A
H POWER SW ASSY
CMK-P3X
POWER SW ASSY
AWX7100
ANP7235-0
CN981
CN602
CN601
S981
S982
S983
S984
S985
D981
R981
S601
S602
S603
S604
S605
S606
S607
S608
S609
S610
A. MUTE
HP. L
HP. R
AG

4.4 POWER SUPPLY, PRIMARY AND TRANS ASSEMBLIES

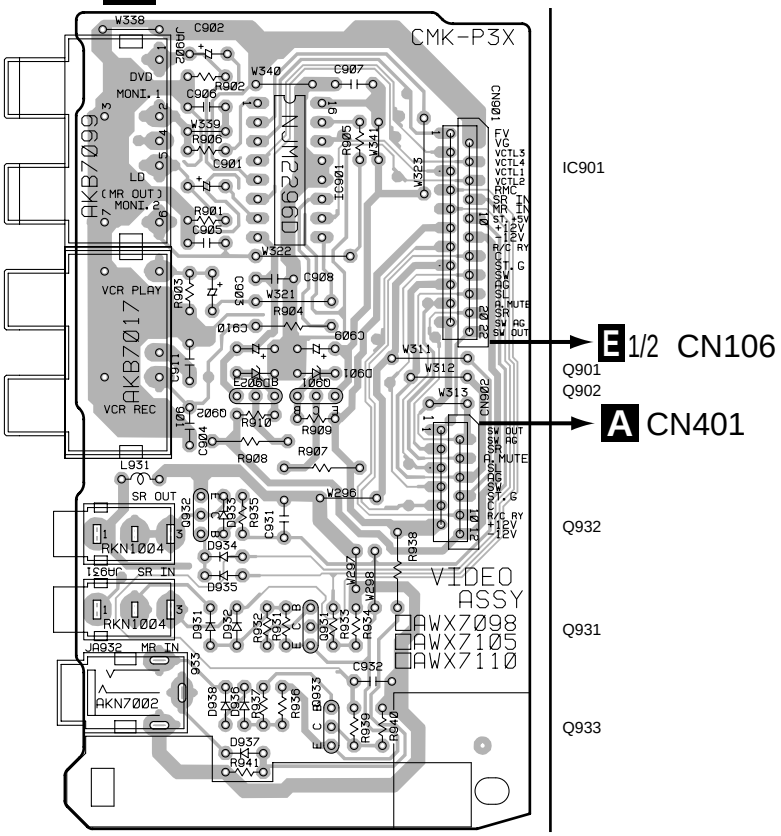


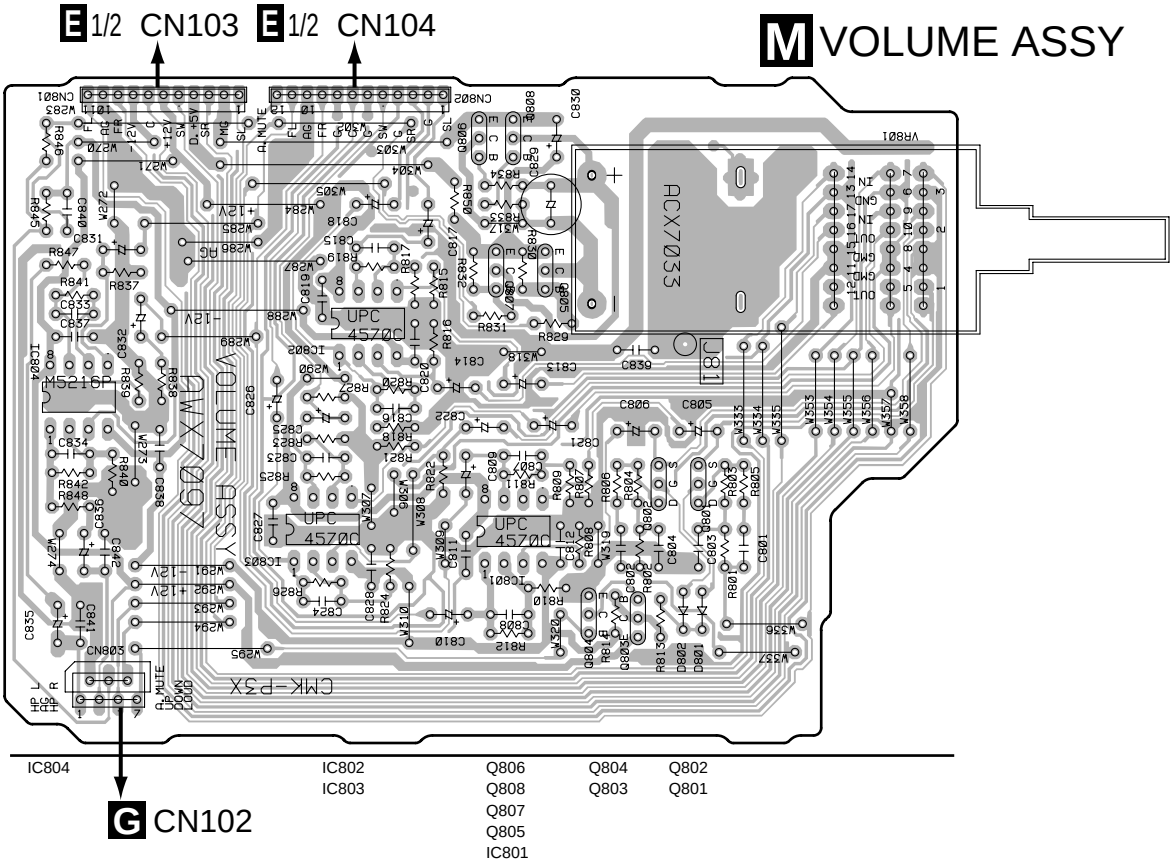
4.5 VIDEO AND VOLUME ASSEMBLIES

(ANP7235-C)

L VIDEO ASSY

SIDE A





5. PCB PARTS LIST

NOTES: ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF ASSEMBLIES

Mark	PCB Assemblies	Part No. VSX-D458 KUXJI	Part No. VSX-D458 KCXJI	Remarks
NSP	MOTHER ASSY	AWK7429	AWK7429	
	├ INPUT ASSY	AWX7091	AWX7091	
	├ R/C SP&6CH ASSY	AWX7092	AWX7092	
	├ REG ASSY	AWX7093	AWX7093	
NSP	├ HP&FAV ASSY	AWX7094	AWX7094	
NSP	├ REG CONNECTION ASSY	AWX7157	AWX7157	
NSP	└ PS CONNECTION ASSY	AWX7158	AWX7158	
NSP	FRONT&PS ASSY	AWK7430	AWK7466	
	├ FL&UCOM ASSY	AWX7095	AWX7095	
	├ POWER SUPPLY ASSY	AWX7096	AWX7194	
	├ VOLUME ASSY	AWX7097	AWX7097	
	├ VIDEO ASSY	AWX7098	AWX7098	
	├ TRANS ASSY	AWX7099	AWX7099	
	└ POWER SW ASSY	AWX7100	AWX7100	

■ PARTS LIST

A R/C SP&6CH ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC421	OP-AMP IC	NJM4558D-D
	IC422	OP-AMP IC	NJM4558D-D
	Q401	TRANSISTOR	KRA103M
	Q402	TRANSISTOR	2SC1740S
	Q405	TRANSISTOR	2SC2878
	D401	DIODE	1SS254
	D402	DIODE	1SS254

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L401	COIL (0.7µH)	ATH1004
	L403	COIL (0.7µH)	ATH1004
	L404	COIL (0.7µH)	ATH1004

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
⚠	RY401	RELAY	ASR7001
⚠	RY402	RELAY	ASR7001

CAPACITORS

Mark	No.	Description	Parts No.
	C401	FILM CAPACITOR	CFTLA104J50
	C403	FILM CAPACITOR	CFTLA104J50
	C404	FILM CAPACITOR	CFTLA104J50
	C405	CERAMIC CAPACITOR	CGCYX473M16
	C406	CERAMIC CAPACITOR	CGCYX473M16
	C407	CERAMIC CAPACITOR	CGCYX473M16
	C421	ELECT. CAPACITOR	CEAT2R2M50
	C422	ELECT. CAPACITOR	CEAT2R2M50
	C423	ELECT. CAPACITOR	CEAT2R2M50
	C424	ELECT. CAPACITOR	CEAT2R2M50
	C425	CERAMIC CAPACITOR	CKPUYY103M16
	C426	CERAMIC CAPACITOR	CKPUYY103M16
	C427	CERAMIC CAPACITOR	CKPUYY103M16
	C428	CERAMIC CAPACITOR	CKPUYY103M16
	C431	CERAMIC CAPACITOR	CGCYX473M16

RESISTORS

Mark	No.	Description	Parts No.
⚠	R401	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R403	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R404	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R405	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R407	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R408	METAL OXIDE RESISTOR	RS1LMF4R7J
	Other Resistors		RD1/4PU□□□J

OTHERS

Mark	No.	Description	Parts No.
	401	CABLE HOLDER (3P)	51052-0300
	403	PIN JACK (6P)	AKB7089
	CN401	CONNECTOR	52045-1245
	CN402	SPEAKER TERMINAL 6-P	AKE7020
	CN404	6PJUMPERCONNECTOR	KPD6
	J17	JUMPER WIRE	DYY03-200-2651

Mark	No.	Description	Parts No.
B	**REG ASSY**		
	SEMICONDUCTORS		
⚠	IC501	REGULATOR IC	NJM78M12FA
⚠	IC502	REGULATOR IC	NJM79M12FA
	IC503	REGULATOR IC	NJM78M05FA
	CAPACITORS		
	C501	CERAMIC CAPACITOR	CKCYF103Z50
	C502	CERAMIC CAPACITOR	CKCYF103Z50
	C503	ELECT. CAPACITOR	CEAT101M16
	C504	ELECT. CAPACITOR	CEAT101M16
	C505	CERAMIC CAPACITOR	CKCYF103Z50
	C506	ELECT. CAPACITOR	CEAT101M10
	C507	ELECT. CAPACITOR	CEAT471M25
	RESISTORS		
⚠	R501	METAL OXIDE RESISTOR	RS3LMF330J
	OTHERS		
	501	13P CABLE HOLDER	51048-1300
	502	12P CABLE HOLDER	51048-1200
C	**HP&FAV ASSY**		
	SEMICONDUCTORS		
	Q551	TRANSISTOR	2SC2878
	Q552	TRANSISTOR	2SC2878
	CAPACITORS		
	C551	CERAMIC CAPACITOR	CGCYX104M16
	RESISTORS		
	R551	CARBON FILM RESISTOR	RD1/2PM470J
	R552	CARBON FILM RESISTOR	RD1/2PM470J
	R555	CARBON FILM RESISTOR	RD1/2PM680J
	R556	CARBON FILM RESISTOR	RD1/2PM680J
	Other Resistors		RD1/4PU□□□J
	OTHERS		
	551	GROUND PLATE	VNF-091
	CN551	CONNECTOR	52045-0445
	JA553	JACK	RKN1002
D	**REG CONNECTION ASSY**		
	OTHERS		
	571	13P CABLE HOLDER	51048-1300
	CN572	13P SOCKET	KP200TA13L
E	**INPUT ASSY**		
	SEMICONDUCTORS		
	IC101	IC	UPC4570C
	IC102	ANALOG SWITCH IC	TC9273N-007
	IC141	E-SW IC	TC9163AN
	IC151	OP-AMP IC	NJM4558D-D
	IC181	OP-AMP IC	NJM4558D-D
	IC182	E-VR IC	M62420FP
	IC201	OP-AMP IC	NJM4558D-D
	IC202	DIGI. SOUND CONTROLL	M62429P
	IC221	OP-AMP IC	NJM4558D-D
	IC222	DIGI. SOUND CONTROLL	M62429P

Mark	No.	Description	Parts No.
	IC251	DSP IC	AK7712A-VQ
	IC252	SRAM	KM62256DLG-7L
	IC253	IC	AK4310-VM
	IC254	HEX INVERTER	TC74HC04AF
⚠	IC301	AUDIO IC	PAC007A
⚠	IC302	AUDIO IC	PAC007A
⚠	IC303	AUDIO IC	PAC008A
	Q1301	TRANSISTOR	2SC2878
	Q1302	TRANSISTOR	2SC2878
	Q1303	TRANSISTOR	2SC2240
	Q1304	TRANSISTOR	2SC2240
	Q1305	TRANSISTOR	2SC2705
	Q1306	TRANSISTOR	2SC2705
	Q1351	TRANSISTOR	2SC2878
	Q1352	TRANSISTOR	2SC2240
	Q181	TRANSISTOR	2SC1740S
	Q182	TRANSISTOR	2SC1740S
	Q291	TRANSISTOR	2SA933S
	Q292	TRANSISTOR	DTC124TS
	Q293	TRANSISTOR	2SC1740S
	Q301	TRANSISTOR	2SC2878
	Q302	TRANSISTOR	2SC2878
	Q303	TRANSISTOR	2SC2240
	Q304	TRANSISTOR	2SC2240
	Q305	TRANSISTOR	2SC2705
	Q306	TRANSISTOR	2SC2705
	Q351	TRANSISTOR	KRA103M
	Q352	TRANSISTOR	KRC101M
	Q355	TRANSISTOR	KRA103M
	Q356	TRANSISTOR	KRC101M
	Q361	TRANSISTOR	2SC1740S
	Q362	TRANSISTOR	2SC1740S
	D1301	DIODE	1SS254
	D1302	DIODE	1SS254
	D1303	DIODE	1SS254
	D1304	DIODE	1SS254
	D1305	DIODE	1SS254
	D1306	DIODE	1SS254
	D1307	DIODE	1SS254
	D1308	DIODE	1SS254
	D1309	DIODE	1SS254
	D1310	DIODE	1SS254
	D1311	DIODE	1SS254
	D1312	DIODE	1SS254
	D1351	DIODE	1SS254
	D1352	DIODE	1SS254
	D1353	DIODE	1SS254
	D1354	DIODE	1SS254
	D1355	DIODE	1SS254
	D151	DIODE	1SS254
	D152	DIODE	1SS254
	D153	DIODE	1SS254
	D154	DIODE	1SS254
	D201	ZENER DIODE	MTZJ10B
	D301	DIODE	1SS254
	D302	DIODE	1SS254
	D303	DIODE	1SS254
	D304	DIODE	1SS254
	D305	DIODE	1SS254
	D306	DIODE	1SS254

Mark	No.	Description	Parts No.
	D307	DIODE	1SS254
	D308	DIODE	1SS254
	D309	DIODE	1SS254
	D310	DIODE	1SS254
	D311	DIODE	1SS254
	D312	DIODE	1SS254
	D352	DIODE	1SS254
	D353	DIODE	1SS254
COILS AND FILTERS			
	L181	AXIAL INDUCTOR	LAU220J
	L182	AXIAL INDUCTOR	LAU220J
	L251	AXIAL INDUCTOR	LAU220J
	L252	AXIAL INDUCTOR	LAU2R2J
	L253	AXIAL INDUCTOR	LAUR22J
	L254	AXIAL INDUCTOR	LAUR22J
	L301	COIL (0.7μH)	ATH1004
	L302	COIL (0.7μH)	ATH1004
SWITCHES AND RELAYS			
	RY352	RELAY	ASR7001
	RY353	RELAY	ASR7001
CAPACITORS			
	C101	ELECT. CAPACITOR	CEAT100M50
	C102	ELECT. CAPACITOR	CEAT100M50
	C103	ELECT. CAPACITOR	CEAT470M16
	C104	ELECT. CAPACITOR	CEAT470M16
	C105	FILM CAPACITOR	CQMBA822J50
	C106	FILM CAPACITOR	CQMBA822J50
	C107	MYLAR FILM CAPACITOR	CQMA242J50
	C108	MYLAR FILM CAPACITOR	CQMA242J50
	C109	ELECT. CAPACITOR	CEAT2R2M50
	C110	ELECT. CAPACITOR	CEAT2R2M50
	C111	CERAMIC CAPACITOR	CGCYX103M16
	C112	CERAMIC CAPACITOR	CGCYX103M16
	C113	CERAMIC CAPACITOR	CGCYX103M16
	C114	CERAMIC CAPACITOR	CGCYX103M16
	C115	CERAMIC CAPACITOR	CCCSL101J50
	C1301	CERAMIC CAPACITOR	CKCYB821K50
	C1302	CERAMIC CAPACITOR	CKCYB821K50
	C1303	ELECT. CAPACITOR	CEAT2R2M50
	C1304	ELECT. CAPACITOR	CEAT2R2M50
	C1305	ELECT. CAPACITOR	CEANP2R2M2A
	C1306	ELECT. CAPACITOR	CEANP2R2M2A
	C1307	CERAMIC CAPACITOR	CKCYB102K50
	C1308	CERAMIC CAPACITOR	CKCYB102K50
	C1311	ELECT. CAPACITOR	CEAT101M25
	C1312	ELECT. CAPACITOR	CEAT101M25
	C1313	ELECT. CAPACITOR	CEAT1R0M50
	C1314	ELECT. CAPACITOR	CEAT1R0M50
	C1315	CERAMIC CAPACITOR	CCCSL470J50
	C1316	CERAMIC CAPACITOR	CCCSL470J50
	C1317	CERAMIC CAPACITOR	CCCSL180J50
	C1318	CERAMIC CAPACITOR	CCCSL180J50
	C1321	ELECT. CAPACITOR	CEAT4R7M2A
	C1322	ELECT. CAPACITOR	CEAT4R7M2A
	C1323	ELECT. CAPACITOR	CEANP2R2M50
	C1324	ELECT. CAPACITOR	CEANP2R2M50
	C1325	FILM CAPACITOR	CFTLA334J50
	C1326	FILM CAPACITOR	CFTLA334J50
	C1351	CERAMIC CAPACITOR	CKCYB821K50
	C1352	ELECT. CAPACITOR	CEAT2R2M50
	C1353	ELECT. CAPACITOR	CEANP2R2M2A
	C1354	ELECT. CAPACITOR	CEANP2R2M2A
	C1355	ELECT. CAPACITOR	CEAT101M25
	C1356	CERAMIC CAPACITOR	CCCSL180J50
	C1357	CERAMIC CAPACITOR	CCCCH101J50
	C1358	CERAMIC CAPACITOR	CCCSL221K2H
	C1359	CERAMIC CAPACITOR	CKCYB102K50
	C1360	CERAMIC CAPACITOR	CCCSL101K2H
	C1361	CERAMIC CAPACITOR	CCCSL470J50
	C1362	ELECT. CAPACITOR	CEAT1R0M2A
	C1363	ELECT. CAPACITOR	CEAT4R7M2A
	C1364	ELECT. CAPACITOR	CEAT4R7M2A
	C1365	ELECT. CAPACITOR	CEANP2R2M50
	C1366	FILM CAPACITOR	CFTLA334J50
	C141	CERAMIC CAPACITOR	CGCYX473M16
	C142	CERAMIC CAPACITOR	CGCYX473M16
	C145	CERAMIC CAPACITOR	CCCSL101J50
	C151	ELECT. CAPACITOR	CEAT2R2M50
	C152	ELECT. CAPACITOR	CEAT2R2M50
	C153	ELECT. CAPACITOR	CEAT221M16
	C154	ELECT. CAPACITOR	CEAT221M16
	C155	ELECT. CAPACITOR	CEAT101M10
	C156	ELECT. CAPACITOR	CEAT101M10
	C157	FILM CAPACITOR	CQMBA102J50
	C158	FILM CAPACITOR	CQMBA102J50
	C159	CERAMIC CAPACITOR	CGCYX103M16
	C160	CERAMIC CAPACITOR	CGCYX103M16
	C161	ELECT. CAPACITOR	CEAT4R7M50
	C162	ELECT. CAPACITOR	CEAT4R7M50
	C163	ELECT. CAPACITOR	CEAT101M16
	C164	ELECT. CAPACITOR	CEAT101M16
	C165	FILM CAPACITOR	CQMBA471J50
	C166	FILM CAPACITOR	CQMBA471J50
	C179	CERAMIC CAPACITOR	CKPUYX682M16
	C180	CERAMIC CAPACITOR	CKPUYX682M16
	C181	ELECT. CAPACITOR	CEAT4R7M50
	C182	ELECT. CAPACITOR	CEAT4R7M50
	C183	FILM CAPACITOR	CQMBA152J50
	C184	FILM CAPACITOR	CQMBA152J50
	C185	FILM CAPACITOR	CQMBA561J50
	C186	FILM CAPACITOR	CQMBA561J50
	C187	FILM CAPACITOR	CQMBA152J50
	C188	FILM CAPACITOR	CQMBA152J50
	C189	ELECT. CAPACITOR	CEAT4R7M50
	C190	ELECT. CAPACITOR	CEAT4R7M50
	C191	FILM CAPACITOR	CFTLA223J50
	C192	FILM CAPACITOR	CFTLA223J50
	C193	FILM CAPACITOR	CFTLA474J50
	C194	FILM CAPACITOR	CFTLA474J50
	C195	FILM CAPACITOR	CFTLA103J50
	C196	FILM CAPACITOR	CFTLA103J50
	C197	ELECT. CAPACITOR	CEAT4R7M50
	C198	ELECT. CAPACITOR	CEAT4R7M50
	C199	CERAMIC CAPACITOR	CGCYX473M16
	C200	CERAMIC CAPACITOR	CGCYX473M16
	C201	ELECT. CAPACITOR	CEAT100M50
	C202	ELECT. CAPACITOR	CEAT4R7M50
	C203	ELECT. CAPACITOR	CEAT221M10
	C204	CERAMIC CAPACITOR	CKCYB102K50
	C207	ELECT. CAPACITOR	CEAT101M16
	C211	ELECT. CAPACITOR	CEAT4R7M50

Mark	No.	Description	Parts No.
	C212	ELECT. CAPACITOR	CEAT4R7M50
	C213	FILM CAPACITOR	CQMBA152J50
	C214	FILM CAPACITOR	CQMBA152J50
	C215	FILM CAPACITOR	CQMBA561J50
	C216	FILM CAPACITOR	CQMBA561J50
	C217	FILM CAPACITOR	CQMBA152J50
	C218	FILM CAPACITOR	CQMBA152J50
	C219	ELECT. CAPACITOR	CEAT4R7M50
	C220	ELECT. CAPACITOR	CEAT4R7M50
	C221	ELECT. CAPACITOR	CEAT4R7M50
	C222	ELECT. CAPACITOR	CEAT4R7M50
	C223	CERAMIC CAPACITOR	CGCYX473M16
	C224	CERAMIC CAPACITOR	CGCYX473M16
	C225	CERAMIC CAPACITOR	CGCYX103M16
	C227	ELECT. CAPACITOR	CEAT4R7M50
	C228	ELECT. CAPACITOR	CEAT4R7M50
	C229	CERAMIC CAPACITOR	CCCSL101J50
	C230	CERAMIC CAPACITOR	CCCSL101J50
	C231	ELECT. CAPACITOR	CEAT4R7M50
	C232	ELECT. CAPACITOR	CEAT4R7M50
	C233	FILM CAPACITOR	CQMBA152J50
	C234	FILM CAPACITOR	CQMBA152J50
	C235	FILM CAPACITOR	CQMBA561J50
	C236	FILM CAPACITOR	CQMBA561J50
	C237	FILM CAPACITOR	CQMBA152J50
	C238	FILM CAPACITOR	CQMBA152J50
	C239	ELECT. CAPACITOR	CEAT4R7M50
	C240	ELECT. CAPACITOR	CEAT4R7M50
	C241	ELECT. CAPACITOR	CEAT4R7M50
	C242	ELECT. CAPACITOR	CEAT4R7M50
	C243	CERAMIC CAPACITOR	CGCYX473M16
	C244	CERAMIC CAPACITOR	CGCYX473M16
	C245	CERAMIC CAPACITOR	CGCYX103M16
	C247	ELECT. CAPACITOR	CEAT4R7M50
	C248	ELECT. CAPACITOR	CEAT4R7M50
	C249	CERAMIC CAPACITOR	CCCSL101J50
	C250	CERAMIC CAPACITOR	CCCSL101J50
	C251	CERAMIC CAPACITOR	CGCYX104M16
	C252	CERAMIC CAPACITOR	CGCYX104M16
	C253	CERAMIC CAPACITOR	CGCYX104M16
	C254	CERAMIC CAPACITOR	CCCCH150J50
	C255	CERAMIC CAPACITOR	CCCCH150J50
	C256	CERAMIC CAPACITOR	CGCYX104M16
	C257	CERAMIC CAPACITOR	CGCYX104M16
	C258	CERAMIC CAPACITOR	CGCYX104M16
	C259	CERAMIC CAPACITOR	CGCYX104M16
	C260	ELECT. CAPACITOR	CEAT101M10
	C261	CERAMIC CAPACITOR	CGCYX104M16
	C262	CERAMIC CAPACITOR	CGCYX104M16
	C263	CERAMIC CAPACITOR	CGCYX104M16
	C264	ELECT. CAPACITOR	CEAT100M50
	C265	ELECT. CAPACITOR	CEAT101M10
	C266	CERAMIC CAPACITOR	CGCYX104M16
	C267	CERAMIC CAPACITOR	CGCYX104M16
	C268	ELECT. CAPACITOR	CEAT100M50
	C269	ELECT. CAPACITOR	CEAT101M10
	C270	CERAMIC CAPACITOR	CGCYX104M16
	C271	CERAMIC CAPACITOR	CGCYX104M16
	C272	CERAMIC CAPACITOR	CCCSL221J50
	C273	ELECT. CAPACITOR	CEAT101M10
	C274	CERAMIC CAPACITOR	CGCYX104M16
	C275	ELECT. CAPACITOR	CEAT100M50
	C276	CERAMIC CAPACITOR	CGCYX103M16
	C277	CERAMIC CAPACITOR	CGCYX104M16
	C278	ELECT. CAPACITOR	CEAT100M50
	C279	CERAMIC CAPACITOR	CGCYX104M16
	C280	CERAMIC CAPACITOR	CGCYX104M16
	C281	CERAMIC CAPACITOR	CGCYX104M16
	C283	CERAMIC CAPACITOR	CCCSL100D50
	C284	CERAMIC CAPACITOR	CCCSL100D50
	C285	CERAMIC CAPACITOR	CCCSL100D50
	C286	CERAMIC CAPACITOR	CGCYX104M16
	C287	CERAMIC CAPACITOR	CGCYX104M16
	C288	CERAMIC CAPACITOR	CGCYX104M16
	C289	CERAMIC CAPACITOR	CGCYX103M16
	C291	ELECT. CAPACITOR	CEAT101M16
	C293	CERAMIC CAPACITOR	CCCSL101J50
	C294	CERAMIC CAPACITOR	CCCSL221J50
	C301	CERAMIC CAPACITOR	CKCYB821K50
	C302	CERAMIC CAPACITOR	CKCYB821K50
	C303	ELECT. CAPACITOR	CEAT2R2M50
	C304	ELECT. CAPACITOR	CEAT2R2M50
	C305	ELECT. CAPACITOR	CEANP2R2M2A
	C306	ELECT. CAPACITOR	CEANP2R2M2A
	C307	CERAMIC CAPACITOR	CKCYB102K50
	C308	CERAMIC CAPACITOR	CKCYB102K50
	C311	ELECT. CAPACITOR	CEAT101M25
	C312	ELECT. CAPACITOR	CEAT101M25
	C313	ELECT. CAPACITOR	CEAT1R0M50
	C314	ELECT. CAPACITOR	CEAT1R0M50
	C315	CERAMIC CAPACITOR	CCCSL470J50
	C316	CERAMIC CAPACITOR	CCCSL470J50
	C317	CERAMIC CAPACITOR	CCCSL180J50
	C318	CERAMIC CAPACITOR	CCCSL180J50
	C321	ELECT. CAPACITOR	CEAT4R7M2A
	C322	ELECT. CAPACITOR	CEAT4R7M2A
	C323	ELECT. CAPACITOR	CEANP2R2M50
	C324	ELECT. CAPACITOR	CEANP2R2M50
	C325	FILM CAPACITOR	CFTLA104J50
	C326	FILM CAPACITOR	CFTLA104J50
	C327	FILM CAPACITOR	CFTLA334J50
	C328	FILM CAPACITOR	CFTLA334J50
	C361	ELECT. CAPACITOR	CEAT221M10
	C362	CERAMIC CAPACITOR	CKCYB102K50

RESISTORS

Mark	No.	Description	Parts No.
⚠	R1311	FUSIBLE REGISTOR (560Ω/ 1/6W)	ACN7036
⚠	R1312	FUSIBLE REGISTOR (560Ω/ 1/6W)	ACN7036
⚠	R1315	CARBON FILM RESISTOR	RD1/4PMF331J
⚠	R1316	CARBON FILM RESISTOR	RD1/4PMF331J
⚠	R1319	CARBON FILM RESISTOR	RD1/4PMF820J
⚠	R1320	CARBON FILM RESISTOR	RD1/4PMF820J
⚠	R1323	RESISTOR (0.22Ω/5W)	ACN7035
⚠	R1324	RESISTOR (0.22Ω/5W)	ACN7035
⚠	R1355	FUSIBLE REGISTOR (560Ω/ 1/6W)	ACN7036
⚠	R1359	CARBON FILM RESISTOR	RD1/4PMF331J
⚠	R1360	CARBON FILM RESISTOR	RD1/4PMF331J
⚠	R1362	RESISTOR (0.22Ω/5W)	ACN7035

Mark	No.	Description	Parts No.
⚠	R1368	CARBON FILM RESISTOR	RD1/4PMF4R7J
⚠	R311	FUSIBLE REGISTOR (560Ω/ 1/6W)	ACN7036
⚠	R312	FUSIBLE REGISTOR (560Ω/ 1/6W)	ACN7036
⚠	R315	CARBON FILM RESISTOR	RD1/4PMF331J
⚠	R316	CARBON FILM RESISTOR	RD1/4PMF331J
⚠	R319	CARBON FILM RESISTOR	RD1/4PMF820J
⚠	R320	CARBON FILM RESISTOR	RD1/4PMF820J
⚠	R323	RESISTOR (0.22Ω/5W)	ACN7035
⚠	R324	RESISTOR (0.22Ω/5W)	ACN7035
⚠	R335	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R336	CARBON FILM RESISTOR	RD1/4PMF100J
⚠	R337	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R338	METAL OXIDE RESISTOR	RS1LMF4R7J
	R351	CARBON FILM RESISTOR	RD1/4PMF103J
	R352	CARBON FILM RESISTOR	RD1/4PMF103J
	Other Resistors		RD1/4PU□□□J

OTHERS

102	12P CABLE HOLDER	51048-1200
105	CABLE HOLDER (11P)	51052-1100
115	5P CABLE HOLDER	51048-0500
116	5P CABLE HOLDER	51048-0500
117	PCB BINDER	VEF1040
118	PCB BINDER	VEF1040
119	PCB BINDER	VEF1040
121	PCB BINDER	VEF1040
122	PCB BINDER	VEF1040
CN101	CONNECTOR	52045-4045
CN103	11P PLUG	KM200TA11
CN104	12P PLUG	KM200TA12
CN106	22P CONNECTOR	52045-2245
CN107	CONNECTOR	52045-1345
CN111	PIN JACK (4P)	AKB7015
CN112	PIN JACK (4P)	AKB7015
CN113	PIN JACK (4P)	AKB7015
CN114	PIN JACK (4P)	AKB7015
CN351	SPEAKER TERMINAL 8-P	AKE7006
CN352	3PJUMPERCONNECTOR	KPD3
J18	JUMPER WIRE	D20PYY0515E
X251	XTAL RES (OSC) (19.9344MHz)	PSS1008

F PS CONNECTION ASSY

OTHERS

581	11P CABLE HOLDER	51052-1100
CN582	11P PULG	KM250NA11L

G FL&UCOM ASSY

SEMICONDUCTORS

IC601	CONTROL MCU	PD5442A
Q601	TRANSISTOR	KRC101M
Q602	TRANSISTOR	2SC1740S
Q603	TRANSISTOR	2SC1740S
Q604	TRANSISTOR	2SA933S
Q605	TRANSISTOR	2SA933S
Q606	TRANSISTOR	KRC101M
Q607	TRANSISTOR	KRC103M
D601	DIODE	1SS254
D602	DIODE	1SS254
D603	DIODE	1SS254
D604	DIODE	1SS254
D605	DIODE	1SS254
D606	DIODE	1SS254
D607	DIODE	1SS254
D608	DIODE	1SS254
D609	DIODE	1SS254
D610	DIODE	1SS254
D611	DIODE	1SS254
D612	DIODE	1SS254
D613	DIODE	1SS254
D614	DIODE	1SS254
D615	DIODE	1SS254
D616	DIODE	1SS254

COILS AND FILTERS

L601	AXIAL INDUCTOR	LAU2R2J
L602	AXIAL INDUCTOR	LAU2R2J
L603	AXIAL INDUCTOR	LAU2R2J
L604	AXIAL INDUCTOR	LAU2R2J

SWITCHES AND RELAYS

S601	SWITCH	ASG1034
S602	SWITCH	ASG1034
S603	SWITCH	ASG1034
S604	SWITCH	ASG1034
S605	SWITCH	ASG1034
S606	SWITCH	ASG1034
S607	SWITCH	ASG1034
S608	SWITCH	ASG1034
S609	SWITCH	ASG1034
S6010	SWITCH	ASG1034
S6011	SWITCH	ASG1034
S6012	SWITCH	ASG1034
S6013	SWITCH	ASG1034
S6014	SWITCH	ASG1034
S6015	SWITCH	ASG1034
S6016	SWITCH	ASG1034
S6017	SWITCH	ASG1034
S6018	SWITCH	ASG1034
S6019	SWITCH	ASG1034
SS620	SWITCH	ASG1034

CAPACITORS

C601	CERAMIC CAPACITOR	CKPUYY103M16
C602	CAPACITOR	ACH7058
C603	ELECT. CAPACITOR	CEAT221M10
C604	CERAMIC CAPACITOR	CKPUYY103M16
C605	CERAMIC CAPACITOR	CKPUYF473Z16
C606	CERAMIC CAPACITOR	CKPUYF473Z16
C607	CERAMIC CAPACITOR	CGCYX104M16
C608	ELECT. CAPACITOR	CEAT2R2M50
C609	ELECT. CAPACITOR	CEAT2R2M50
C610	AXIAL CAPACITOR	CKPYF103Z50
C611	ELECT. CAPACITOR	CEAT470M10
C612	CERAMIC CAPACITOR	CGCYX103M16
C613	CERAMIC CAPACITOR	CKPUYY103M16
C614	CERAMIC CAPACITOR	CKPUYY103M16
C615	CERAMIC CAPACITOR	CKPUYY103M16
C616	CERAMIC CAPACITOR	CCCSL101J50
C617	CERAMIC CAPACITOR	CCCSL101J50
C618	ELECT. CAPACITOR	CEAT470M10
C619	CERAMIC CAPACITOR	CCCSL101J50
C620	CERAMIC CAPACITOR	CCCSL101J50

Mark	No.	Description	Parts No.
	C621	CERAMIC CAPACITOR	CCCSL101J50
	C622	ELECT. CAPACITOR	CEAT101M35
	C623	ELECT. CAPACITOR	CEAT470M35
	C651	CERAMIC CAPACITOR	CCCSL101J50
	C652	CERAMIC CAPACITOR	CCCSL101J50
	C653	CERAMIC CAPACITOR	CCCSL101J50
	C654	CERAMIC CAPACITOR	CCCSL101J50
	C655	CERAMIC CAPACITOR	CCCSL101J50
	C656	CERAMIC CAPACITOR	CCCSL101J50
	C657	CERAMIC CAPACITOR	CCCSL101J50
	C658	CERAMIC CAPACITOR	CCCSL101J50

RESISTORS

	All Resistors		RD1/4PU□□□J

OTHERS

	601	REMOTE RECEIVER UNIT	GP1U28X
	CN601	CONNECTOR	52045-4045
	CN602	CONNECTOR	XKP3007
	CN603	CONNECTOR	XKP3004
	CN604	CONNECTOR	XKP3007
	V601	FL TUBE	AAV7054
	X601	CERAMIC RESONATOR (4.19MHz)	ASS1018

H POWER SW ASSY

SEMICONDUCTORS

	D981	LED(RED)	AEL1065

SWITCHES AND RELAYS

	S981	SWITCH	ASG1034
	S982	SWITCH	ASG1034
	S983	SWITCH	ASG1034
	S984	SWITCH	ASG1034
	S985	SWITCH	ASG1034

RESISTORS

	All Resistors		RD1/4PU□□□J

OTHERS

	CN981	CONNECTOR	XKP3007

I POWER SUPPLY ASSY

(1) CONTRAST TABLE

AWX7096 and AWX7194 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWX7096	AWX7194	
	H707, H708 FUSE CLIP	Not used	AKR1004	

(2) PARTS LIST FOR AWX7096

SEMICONDUCTORS

	IC701	REGULATOR IC	NJM78M56FA
	IC711	OP-AMP IC	NJM4558D-D
	IC712	OP-AMP IC	NJM4558D-D
	Q701	TRANSISTOR	KRC101M
⚠	Q711	POWER MOS FET	IRF9540A
⚠	Q712	POWER MOS FET	IRF540A
	Q713	TRANSISTOR	2SC1845
	Q714	TRANSISTOR	2SA992
	Q715	TRANSISTOR	KRC101M
	D701	ZINER DIODE	MTZJ5.1A
	D702	DIODE	S5688G
	D703	DIODE	1SS254
	D704	DIODE	1SS254
⚠	D705	DIODE	S5688G
⚠	D706	DIODE	S5688G
⚠	D707	DIODE	S5688G
⚠	D708	DIODE	S5688G
	D709	ZENER DIODE	MTZJ22A
	D710	ZENER DIODE	MTZJ4.3C
⚠	D711	DIODE	D5SBA20
⚠	D712	DIODE	D5SBA20
	D713	ZENNER DIODE	MTZJ18B
	D714	ZENNER DIODE	MTZJ18B
	D715	DIODE	1SS254
	D716	DIODE	1SS254

COILS AND FILTERS

⚠	L701	LINE FILTER	ATF1006

TRANSFORMERS

⚠	T701	POWER TRANSFORMER	ATT1223

SWITCHES AND RELAYS

	S711	SLIDE SWITCH	ASH1027
⚠	RY701	LOWPOWER RELAY	ASR7016

CAPACITORS

	C701	ELECT. CAPACITOR	CEAT470M10
	C702	ELECT. CAPACITOR	CEAT471M16
	C703	CERAMIC CAPACITOR	CGCYX103M25
⚠	C704	CKA (10000pF/AC250V)	ACG7020
⚠	C705	CKA (0.022µF/AC400V)	ACG1030
	C707	ELECT. CAPACITOR	CEAT472M25
	C708	ELECT. CAPACITOR	CEAT472M25
	C709	ELECT. CAPACITOR	CEAT101M35
	C710	ELECT. CAPACITOR	CEAT101M10
⚠	C711	CKA (0.01µF/AC250V)	ACG1005
⚠	C712	CKA (0.01µF/AC250V)	ACG1005
	C713	ELECT. CAPACITOR	CEAT101M2A
	C714	ELECT. CAPACITOR	CEAT101M2A
	C715	ELECTROLYTIC CAPACITOR (8200pF)	ACH7018
	C716	ELECTROLYTIC CAPACITOR (8200pF)	ACH7018
	C717	ELECT. CAPACITOR	CEAT1R0M50
	C718	ELECT. CAPACITOR	CEAT1R0M50
	C719	ELECT. CAPACITOR	CEAT4R7M50
	C731	ELECT. CAPACITOR	CEAT470M16
	C732	ELECT. CAPACITOR	CEAT470M16
	C733	ELECT. CAPACITOR	CEAT470M16
	C734	ELECT. CAPACITOR	CEAT470M16
	C739	ELECT. CAPACITOR	CEAT100M50

Mark	No.	Description	Parts No.
RESISTORS			
	R703	CARBON FILM RESISTOR	RD1/2PM270J
⚠	R704	RESISTOR (2.2MΩ/ 1/2W)	RCN1080
⚠	R705	METAL OXIDE RESISTOR	RS3LMF472J
⚠	R711	CARBON FILM RESISTOR	RD1/4PMF101J
⚠	R712	CARBON FILM RESISTOR	RD1/4PMF101J
	Other Resistors		RD1/4PU□□□J
OTHERS			
⚠	703	AC SOCKET 1-P	AKP1060
	711	CABLE HOLDER (11P)	51052-1100
	712	5P CABLE HOLDER	51048-0500
	713	CABLE HOLDER (6P)	51052-0600
	CN714	11P SOCKET	KP250NA11
	CN715	13P PLUG	KM200TA13
	H701	FUSE CLIP	AKR1004
	H702	FUSE CLIP	AKR1004
	H703	FUSE CLIP	AKR1004
	H704	FUSE CLIP	AKR1004
	J15	JUMPER WIRE	DYY06-150-2651
	KN704	EARTH METAL FITTING	VNF1084

J PRIMARY ASSY

PRIMARY assembly has no service part.

K TRANS ASSY

SEMICONDUCTORS

⚠	IC951	PROTECTOR (3.5A)	AEK7017
⚠	IC952	PROTECTOR (3.5A)	AEK7017
⚠	D951	DIODE	S5688G
⚠	D952	DIODE	S5688G

CAPACITORS

C951	ELECT. CAPACITOR	CEAT101M50
C952	ELECT. CAPACITOR	CEAT101M50

RESISTORS

All Resistors		RD1/4PU□□□J

OTHERS

951	CABLE HOLDER (11P)	51052-1100
952	5P CABLE HOLDER	51048-0500

L VIDEO ASSY

SEMICONDUCTORS

IC901	VIDEO SW IC	NJM2296D
Q901	TRANSISTOR	2SC1740S
Q902	TRANSISTOR	2SA933S
Q931	TRANSISTOR	2SA933S
Q932	TRANSISTOR	KRC103M
D901	ZENER DIODE	MTZJ5.6B
D902	ZENER DIODE	MTZJ5.6B
D932	DIODE	1SS254
D933	DIODE	1SS254

Mark	No.	Description	Parts No.
CAPACITORS			
	C901	ELECT. CAPACITOR	CEAT4R7M50
	C902	ELECT. CAPACITOR	CEAT4R7M50
	C903	ELECT. CAPACITOR	CEAT4R7M50
	C904	CERAMIC CAPACITOR	CCCSL470J50
	C905	CERAMIC CAPACITOR	CCCSL470J50
	C906	CERAMIC CAPACITOR	CCCSL470J50
	C907	CERAMIC CAPACITOR	CGCYX473M16
	C908	CERAMIC CAPACITOR	CGCYX473M16
	C909	ELECT. CAPACITOR	CEAT470M10
	C910	ELECT. CAPACITOR	CEAT470M10
	C911	CERAMIC CAPACITOR	CGCYX473M16
	C931	CERAMIC CAPACITOR	CGCYX103M16
RESISTORS			
	R907	CARBON FILM RESISTOR	RD1/2PM151J
	R908	CARBON FILM RESISTOR	RD1/2PM151J
	Other Resistors		RD1/4PU&&&J
OTHERS			
	901	2P RCA PINJACK	AKB7017
	CN901	22P CONNECTOR	52045-2245
	CN902	CONNECTOR	52045-1245
	JA902	PIN JACK(4P)YELLOW	AKB7099
	JA931	JACK	RKN1004

M VOLUME ASSY

SEMICONDUCTORS

IC801	IC	UPC4570C
IC802	IC	UPC4570C
IC803	IC	UPC4570C
IC804	OP-AMP IC	M5216P
Q801	N-FET	2SK246
Q802	N-FET	2SK246
Q803	TRANSISTOR	KRA103M
Q804	TRANSISTOR	KRC103M
Q805	TRANSISTOR	2SA1115
Q806	TRANSISTOR	2SC2603
Q807	TRANSISTOR	2SA1115
Q808	TRANSISTOR	2SC2603
D801	DIODE	1SS254
D802	DIODE	1SS254

CAPACITORS

C801	CERAMIC CAPACITOR	CKCYB561K50
C802	CERAMIC CAPACITOR	CKCYB561K50
C803	FILM CAPACITOR	CFTLA104J50
C804	FILM CAPACITOR	CFTLA104J50
C805	ELECT. CAPACITOR	CEAT4R7M50
C806	ELECT. CAPACITOR	CEAT4R7M50
C807	AXIAL CAPACITOR	CKPUYB561K50
C808	AXIAL CAPACITOR	CKPUYB561K50
C809	ELECT. CAPACITOR	CEAT4R7M50
C810	ELECT. CAPACITOR	CEAT4R7M50
C811	CERAMIC CAPACITOR	CGCYX104M16
C812	CERAMIC CAPACITOR	CGCYX104M16
C813	ELECT. CAPACITOR	CEAT4R7M50
C814	ELECT. CAPACITOR	CEAT4R7M50
C815	AXIAL CAPACITOR	CKPUYB681K50

Mark	No.	Description	Parts No.
	C816	AXIAL CAPACITOR	CKPUYB681K50
	C817	ELECT. CAPACITOR	CEAT4R7M50
	C818	ELECT. CAPACITOR	CEAT4R7M50
	C819	CERAMIC CAPACITOR	CGCYX104M16
	C820	CERAMIC CAPACITOR	CGCYX104M16
	C821	ELECT. CAPACITOR	CEAT4R7M50
	C822	ELECT. CAPACITOR	CEAT4R7M50
	C823	AXIAL CAPACITOR	CKPUYB821K50
	C824	AXIAL CAPACITOR	CKPUYB681K50
	C825	ELECT. CAPACITOR	CEAT4R7M50
	C826	ELECT. CAPACITOR	CEAT4R7M50
	C827	CERAMIC CAPACITOR	CGCYX104M16
	C828	CERAMIC CAPACITOR	CGCYX104M16
	C829	ELECT. CAPACITOR	CEANP100M50
	C830	ELECT. CAPACITOR	CEAT221M10
	C831	ELECT. CAPACITOR	CEAT4R7M50
	C832	ELECT. CAPACITOR	CEAT4R7M50
	C833	CERAMIC CAPACITOR	CKPUYB151K50
	C834	CERAMIC CAPACITOR	CKPUYB151K50
	C835	ELECT. CAPACITOR	CEAT101M16
	C836	ELECT. CAPACITOR	CEAT101M16
	C837	CERAMIC CAPACITOR	CGCYX104M16
	C838	CERAMIC CAPACITOR	CGCYX104M16
	C839	CERAMIC CAPACITOR	CGCYX104M16
	C840	CERAMIC CAPACITOR	CGCYX473M16
	C841	CERAMIC CAPACITOR	CKPUYY103M16
	C842	CERAMIC CAPACITOR	CKPUYY103M16

RESISTORS

	VR801	VARIABLE RESISTOR (50KΩ)	ACX7033
	Other Resistors		RD1/4PU□□□J

OTHERS

	CN801	11P SOCKET	KP200TA11L
	CN802	12P SOCKET	KP200TA12L
	CN803	CONNECTOR	52045-0745

6. ADJUSTMENT

There is no information to be shown in this chapter.

7. GENERAL INFORMATION

7.1 PARTS

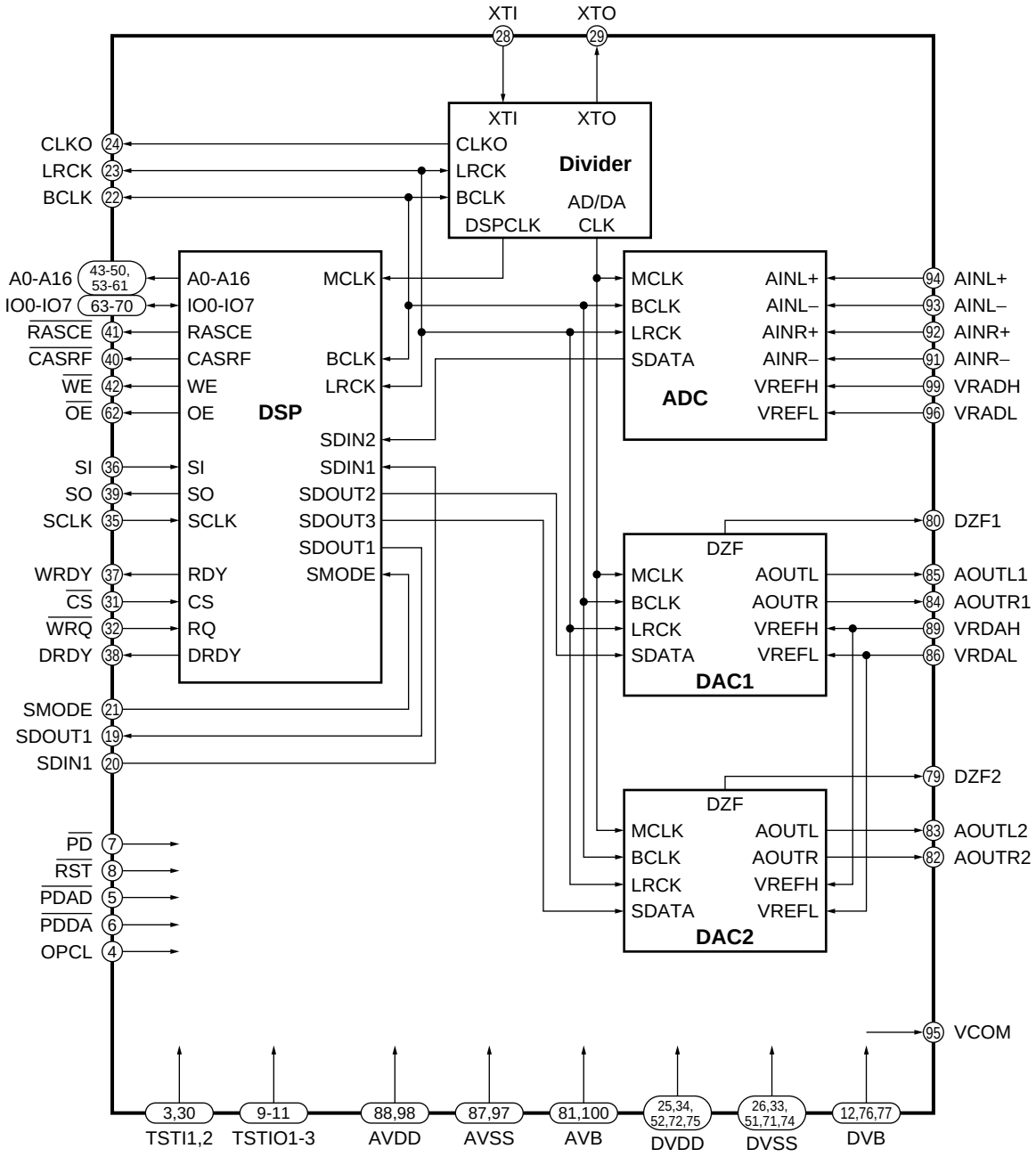
7.1.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ AK7712A-VQ (INPUT ASSY : IC251)

• 24-bit DSP with AD/DA

● Block Diagram



●Pin Function

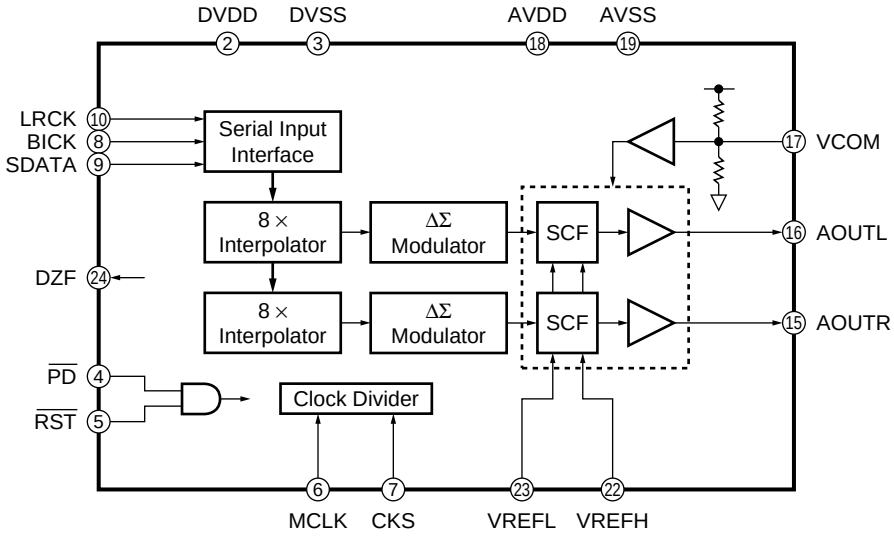
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	NC	–	Non connection	26	DVSS	–	Digital ground
2	NC	–	Non connection	27	NC	–	Non connection
3	TSTI1	I	Test input 1 Use for L or open	28	XTI	I	Clock input Connect a crystal resonator between this pin and XTO pin, or input external CMOS clock to XTI.
4	OPCL	I	ADC and DAC connection selection L: connect H: Disconnect	29	XTO	O	Crystal resonator output Connect a crystal resonator between this pin and XTI pin. Set to open when using external clock.
5	$\overline{\text{PDAD}}$	I	AD reset control	30	TSTI2	I	CLKO (pin 24) output control L or open: CLKO pin output, H: CLKO pin to L
6	$\overline{\text{PDDA}}$	I	DA reset control	31	$\overline{\text{CS}}$	I	Chip select input for microprocessor interface
7	$\overline{\text{PD}}$	I	Power down	32	$\overline{\text{WRQ}}$	I	Command register reset input for microprocessor interface
8	$\overline{\text{RST}}$	I	Reset input (L: reset)	33	DVSS	–	Digital ground
9	TSTIO1	I/O	Test input/output 1 Use for L or open.	34	DVDD	–	Digital power supply
10	TSTIO2	I/O	Test input/output 2 Use for L or open.	35	SCLK	I	Clock input for serial data input of microprocessor interface
11	TSTIO3	I/O	Test input/output 3 Use for L or open.	36	SI	I	Serial data input for microprocessor interface
12	DVB	–	Digital board power supply	37	WRDY	O	Data writing ready output for microprocessor interface It becomes Hi-Z with $\overline{\text{CS}}$ = H.
13	SDIN2	I	Serial data input 2 (OPCL: H) Correspond to 16 or 20 bit by front close.	38	DRDY	O	Output data ready output for microprocessor interface
14	SDAD	O	Serial data output 2 (OPCL: H) Correspond to 16 or 20 bit by front close and common setting with SDIN2.	39	SO	O	Serial data output for microprocessor interface It becomes Hi-Z with $\overline{\text{CS}}$ = H.
15	SDOUT2	O	Serial data output 3 (OPCL: H) Correspond to 16 or 20 bit by front close.	40	$\overline{\text{CASRF}}$	O	CAS/quasi-SRAM refresh for external DRAM
16	SDDA	I	Serial data input 3 (OPCL: H) Correspond to 16 or 20 bit by front close and common setting with SDOUT2.	41	$\overline{\text{RASCE}}$	O	RAS/quasi-SRAM-$\overline{\text{CE}}$ pin for external DRAM
17	SDDA2	I	Serial data input 4 (OPCL: H) Correspond to 20 bit by front close (16bit at BCLK:32fs).	42	$\overline{\text{WE}}$	O	Write signal output for external SRAM/quasi-SRAM/DRAM
18	SDOUT3	O	Serial data output 4 (OPCL: H) Correspond to 20 bit by front close (16bit at BCLK:32fs).	43	A16	O	Address output for external RAM (A16:MSB)
19	SDOUT1	O	Serial data output 1 (Correspond to 16 or 24 bit by front close and 16 bit by rear close.)	44	A15		
20	SDIN1	I	Serial data input 1 (Correspond to 16 or 24 bit by front close and 16 bit by rear close.)	45	A14		
21	SMODE	I	Interface clock selection Input/output setting of LRCK and BCLK clocks L: Slave mode (22 and 23 pins input) H: Master mode (output)	46	A13		
22	BCLK	I/O	Clock input/output for serial data input	47	A12		
23	LRCK	I/O	L/R channel discrimination signal input/output	48	A11		
24	CLKO	O	Master clock output	49	A10		
25	DVDD	–	Digital power supply	50	A9		

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
51	DVSS	–	Digital ground	76	DVB	–	Digital board power supply
52	DVDD	–	Digital power supply	77	DVB	–	Digital board power supply
53	A8	O	Address output for external RAM (A0:LSB)	78	NC	–	Non connection
54	A7			79	DZF2	O	Zero input detection for DAC2
55	A6			80	DZF1	O	Zero input detection for DAC1
56	A5			81	AVB	–	Analog board power supply
57	A4			82	AOUTR2	O	Analog output 2 of DAC2 R ch
58	A3			83	AOUTL2	O	Analog output 2 of DAC2 L ch
59	A2			84	AOUTR1	O	Analog output 1 of DAC1 R ch
60	A1			85	AOUTL1	O	Analog output 1 of DAC1 L ch
61	A0			86	VRDAL	I	Reference voltage input of DAC section Normally, connect to analog ground.
62	$\overline{OE}$	O	Output enable signal output for external SRAM/quasi-SRAM/DRAM	87	AVSS	–	Analog ground
63	IO0	I/O	Data input/output for external RAM	88	AVDD	–	Analog power supply
64	IO1			89	VRDAH	I	Reference voltage input of DAC section Normally, connect to AVDD (pin 88) and connect two capacitors (0.1µF and 10µF) between this pin and VRDAL.
65	IO2			90	NC	–	Non connection
66	IO3			91	AINR –	I	Analog inverting input of ADC R ch
67	IO4			92	AINR +	I	Analog non-inverting input of ADC R ch
68	IO5			93	AINL –	I	Analog inverting input of ADC L ch
69	IO6			94	AINL +	I	Analog non-inverting input of ADC L ch
70	IO7			95	VCOM	O	Common voltage pin Connect two capacitors (0.1µF and 10µF) with analog ground.
71	DVSS	–	Digital ground	96	VRADL	I	Reference voltage input of ADC section Normally, connect to analog ground.
72	DVDD	–	Digital power supply	97	AVSS	–	Analog ground
73	DZFSET	I	Zero point detection setting H: DZF output L: DZF output to L	98	AVDD	–	Analog power supply
74	DVSS	–	Digital ground	99	VRADH	I	Reference voltage input of ADC section Normally, connect to AVDD (pin 98) and connect two capacitors (0.1µF and 10µF) between this pin and VRADL.
75	DVDD	–	Digital power supply	100	AVB	–	Analog board power supply

■ AK4310-VM (INPUT ASSY : IC253)

• 16-bit 2ch ΔΣ SYSTEM D/A CONVERTER with ANALOG FILTER

● Block Diagram



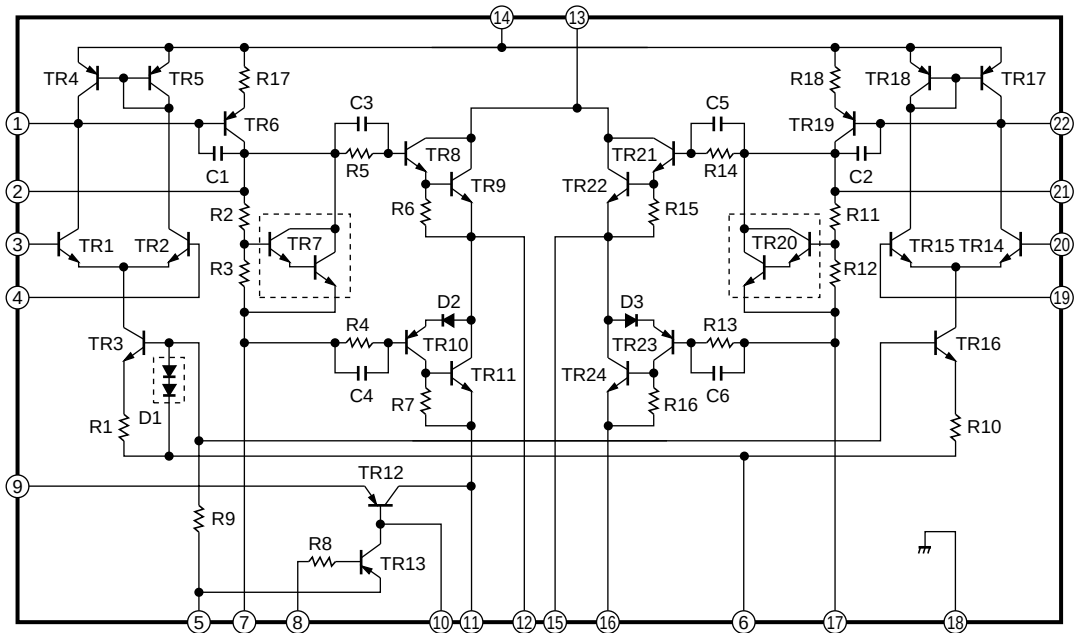
●Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	TST1	I	Test pin (pull down) Connect to open or L.	13	NC	–	Non connection
2	DVDD	–	Digital power supply pin	14	NC		
3	DVSS	–	Digital ground pin	15	AOUTR	O	R ch analog output pin
4	$\overline{PD}$	I	Power down pin	16	AOUTL	O	L ch analog output pin
5	$\overline{RST}$	I	Reset pin	17	VCOM	O	Common voltage pin, AVDD/2
6	MCLK	I	Master clock input pin	18	AVDD	–	Analog power supply pin
7	CKS	I	Clock selection pin L: CLK=256fs H: CLK=384fs	19	AVSS	–	Analog ground pin
8	BICK	I	Serial bit clock pin	20	NC	–	Non connection
9	SDATA	I	Serial data input pin	21	NC		
10	LRCK	I	L/R clock pin	22	VREFH	I	"H" reference voltage input pin
11	NC	–	Non connection	23	VREFL	I	"L" reference voltage input pin
12	NC			24	DZF	O	Zero input detection pin

■ PAC007A (INPUT ASSY : IC301, IC302)

• 2ch AF POWER AMP

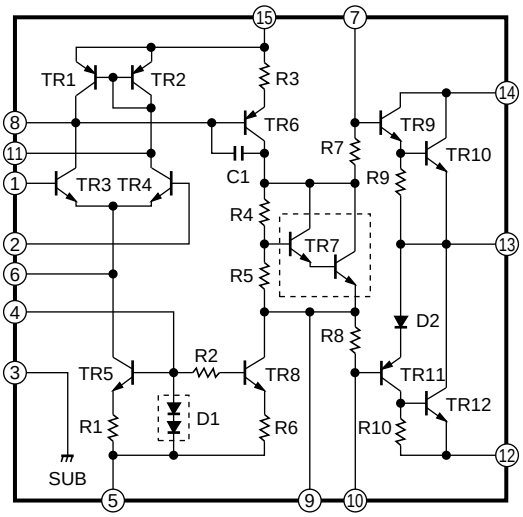
● Block Diagram



■ PAC008A (INPUT ASSY : IC303)

• 1ch POWER AMP

● Block Diagram



■ PD5442A (FL&UCOM ASSY : IC601)

• CONTROL MCU

● Pin Function

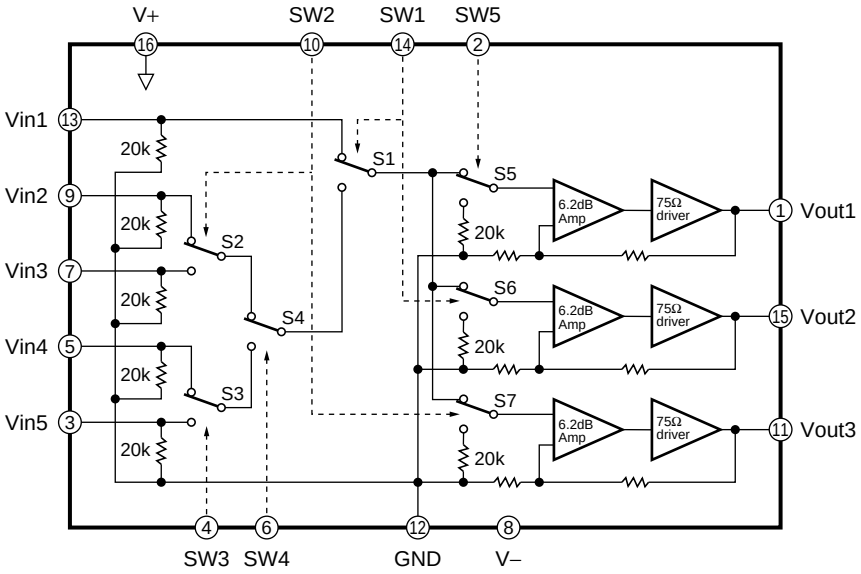
No.	Pin Name	Function Name	I/O	Function
1	P75/AN5	R/C RY	O	Turn on and off the transistor switch of RY for rear and center speakers
2	P74/AN4	V-SW 2	O	Control the VIDEO FUNCTION IC.
3	P73/AN3	V-SW 1	O	
4	P72/AN2	V-SW 4	O	
5	P71/AN1	V-SW 3	O	
6	P70/AN0	LOUDNESS	O	Turn on and off the transistor switch of LOUDNESS ON: lights up "LOUDNESS" indicator DIRECT ON: forced OFF
7	P61/CNT0/CNT2	A-MUTE	O	Control the audio system mute
8	P60/CNT1	MR IN (ELITE)	I	MR in (Hi: 37)
9	P47/INT2	REMOCON	I	SR remote control input
10	RESET	RESET	I	Reset input
11	P91/Xcout	VOL. UP	O	Motor volume control L for VOL. UP
12	P90/Xcin	VOL. DOWN	O	Motor volume control L for VOL. DOWN
13	Vss	GND	–	Ground
14	Xin	Oscillation	I	Connect a 4.19MHz oscillator
15	Xout	Oscillation	O	
16	Vcc	+5V	–	+5V Power supply
17	P46/SCL1/T3OUT	————	–	————
18	P45/SDA1/T1OUT	T-POWER	O	Turn on and off the transistor switch for power supply when Tuner function is selected
19	P44/PWM1	T-MUTE	O	Mute control of Tuner output
20	P43/BUZ01	STEREO	I	Input L when Tuner receives stereo broadcasting.
21	P42/INT3	TUNED	I	Input L when Tuner is TUNE state.
22	P41/INT1	DO (for TUNER)	I	Serial data input from the TUNER PLL IC
23	P40/INT0	AC WAKE UP	I	AC wake up input
24	P87/PWM0/FLD3-9	CLOCK	O	Control the PLL IC, A. FUNC IC, E. VOL IC and E.TONE IC with the clock of serial control.
25	P86/RTP1/FLD38	DA0 (fot TX. TC)	O	Control the PLL IC and A. FUNC IC with the data of serial control.
26	P85/RTP0/FLD37	PLL CE	O	Chip enable of serial control of TUNER PLL IC
27	P84/FLD36	DA3 (for E-VOL. 2)	O	Serial control data output of E. VOL (for rear, center and sub woofer) IC M62429 (X2)
28	Vee	– VF	–	-VF (-45V)
29	P83/FLD35	DA2 (for E-VOL. 1)	O	Serial control data output of E. VOL (for rear, center and sub woofer) IC M62429 (X2)
30	P82/FLD34	DA1 (for E-TONE)	I/O	Serial control data input/output (by I^2C bus) of E. TONE IC M62420
31	P81/FLD33	ST1 (for TC9273)	O	Serial control strobe of FUNCTION IC TC9273
32	P80/FLD32	ST2 (for TC9163)	O	Serial control strobe of FUNCTION IC (for 6ch IN) TC9163
33	P37/FLD31	Grid 1	O	FL drive grid output
34	P36/FLD30	Grid 2		
35	P35/FLD29	Grid 3		
36	P34/FLD28	Grid 4		
37	P33/FLD27	Grid 5		
38	P32/FLD26	Grid 6		
39	P31/FLD25	Grid 7		
40	P30/FLD24	Grid 8		
41	P17/FLD23	Grid 9		

No.	Pin Name	Function Name	I/O	Function
42	P16/FLD22	Seg. 1/KEY 1	O	FL drive segment output Key scan output
43	P15/FLD21	Seg. 2/KEY 2		
44	P14/FLD20	Seg. 3/KEY 3		
45	P13/FLD19	Seg. 4/KEY 4		
46	P12/FLD18	Seg. 5/KEY 5		
47	P11/FLD17	Seg. 6/KEY 6		
48	P10/FLD16	Seg. 7/KEY 7		
49	P07/FLD15	Seg. 8/KEY 8		
50	P06/FLD14	Seg. 9/KEY 9		
51	P05/FLD13	Seg. 10/KEY 10		
52	P04/FLD12	Seg. 11	O	FL drive segment output
53	P03/FLD11	Seg. 12		
54	P02/FLD10	Seg. 13		
55	P01/FLD9	Seg. 14		
56	P00/FLD8	Seg. 15		
57	P27/FLD7	Seg. 16		
58	P26/FLD6	Seg. 17		
59	P25/FLD5	KEY IN 1	I	Key scan input
60	P24/FLD4	KEY IN 2		
61	P23/FLD3	KEY IN 3		
62	P22/FLD2	————	–	————
63	P21/FLD1	————	–	————
64	P20/BUZ02/FLD0	————	–	————
65	P57/Srdy2/Sclk22	————	–	————
66	P56/Sclk21	Power down (DSP)	O	Power down state at L
67	P55/TxD	Reset (DSP)	O	Reset the DSP
68	P54/RxD	CS (DSP)	O	Outputs for reset the DSP command register
69	P53/Sclk12	REQ (DSP)	O	Chip select output of the DSP serial control
70	P52/Sclk11	Clock (DSP)	O	Clock output of the DSP serial control
71	P51/Sout1	Data out (DSP)	O	Data output of the DSP serial control
72	P50/Sin1	Data in (DSP)	I	Serial data output from the DSP
73	AVss	GND	–	Ground
74	Vref	5V	–	Reference voltage
75	P65/Sstb1/AN11	DC DET	I	DC detector input of the protection circuit When Lo is input, Open the relay excepting AC relay. L : 8-figures of FL flash "POWEROFF".
76	P64/INT4/Sbusy1	AMP OL	I	Overload detector input of the protection circuit When Lo is input, Open the relay excepting AC relay. L : 8-figures of FL flash "OVERLOAD".
77	P63/AN9	AC RY	I	Turn on and off the transistor switch of relay for AC powe Stand by : L Power on : H
78	P62/Srdy1/AN8	FRONT RY	O	Turn on and off the transistor switch of relay for the front speaker which connecting with series .
79	P77/AN7	SP-A RY	O	
80	P76/AN6	SP-B RY	O	

■ NJM2296D (VIDEO ASSY : IC901)

• VIDEO SW IC

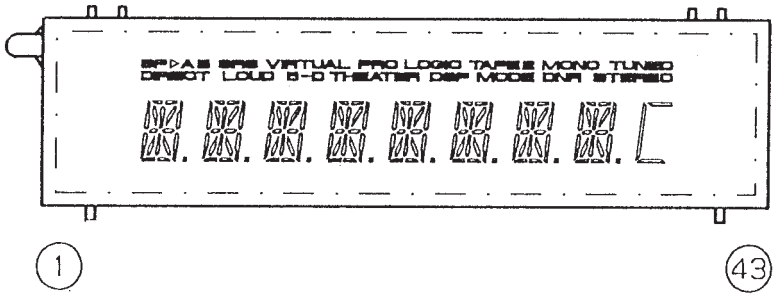
● Block Diagram



7.1.2 DISPLAY

■ AAV7054

● **FL Tube**

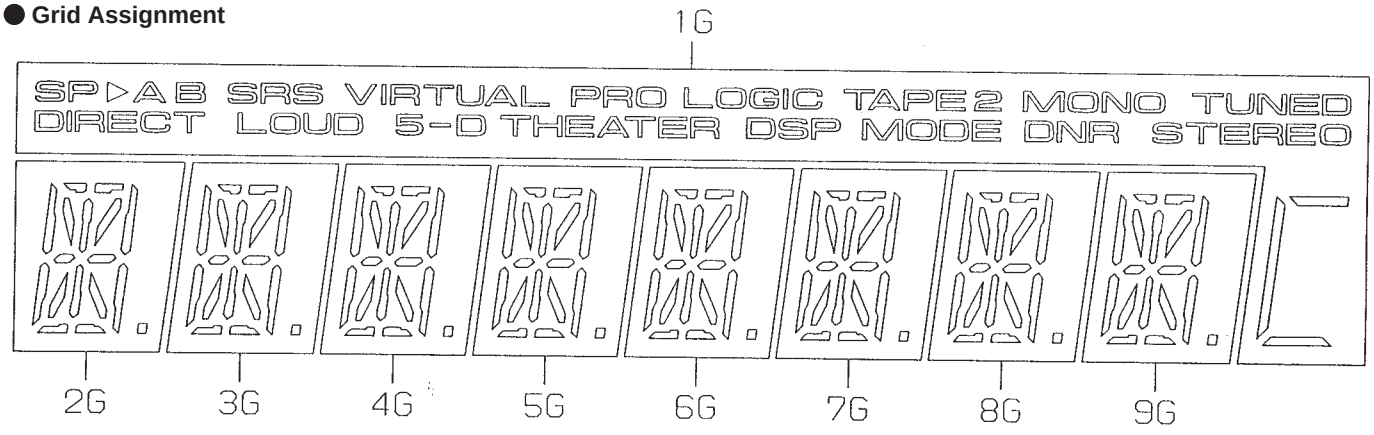


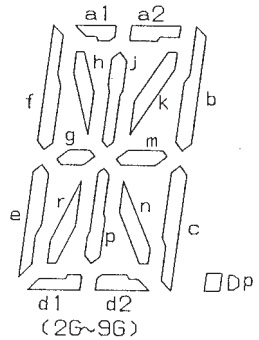
● **Pin Assignment**

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
CONNECTION	F1	F1	NP	NP	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NX	NX	NX	NX	NX	NX	NX	NX	1G	2G	3G	4G	5G	6G	7G	8G	9G	NP	NP	F2	F2

NOTE 1) F1,F2 --- Filament
2) NP ------ No Pin
3) NX ------ No extend pin
4) DL ------ Datum Line
5) 1G~9G --- Grid

● **Grid Assignment**





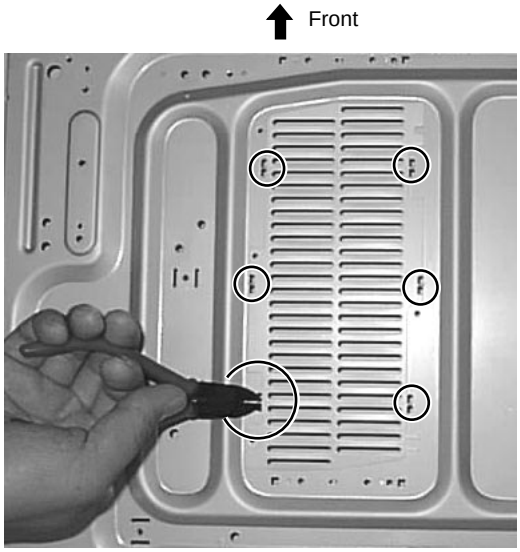
● **Anode Connection**

	1G	2G~9G
P1	SP ▷	a1
P2	A	a2
P3	B	h
P4	DIRECT	j
P5	LOUD	k
P6	SRS	b
P7	VIRTUAL	f
P8	PRO LOGIC	m
P9	5-D THEATER	g
P10	DSP MODE	c
P11	TAPE 2	e
P12	DNR	r
P13	⌐	p
P14	MONO	n
P15	TUNED	d1
P16	STEREO	d2
P17	–	Dp

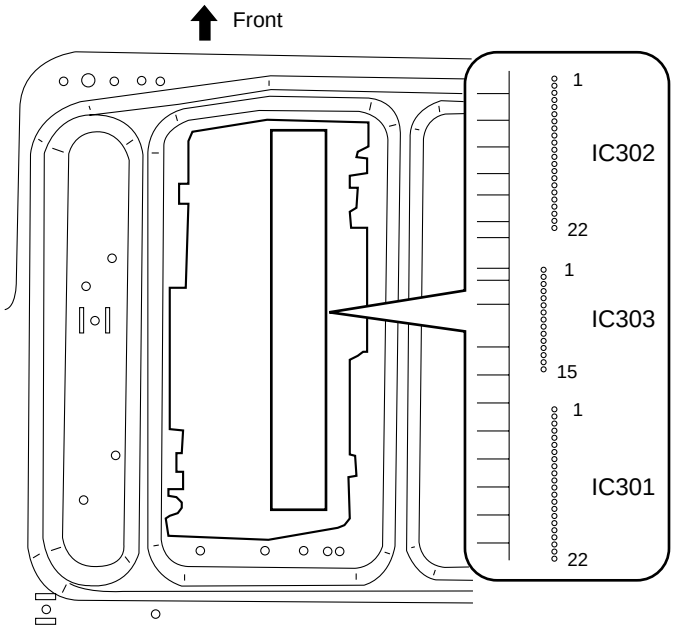
7.2 DIAGNOSIS

■ How to Diagnose the P-PACK (IC301, IC302 AND IC303) (At Bottom Side)

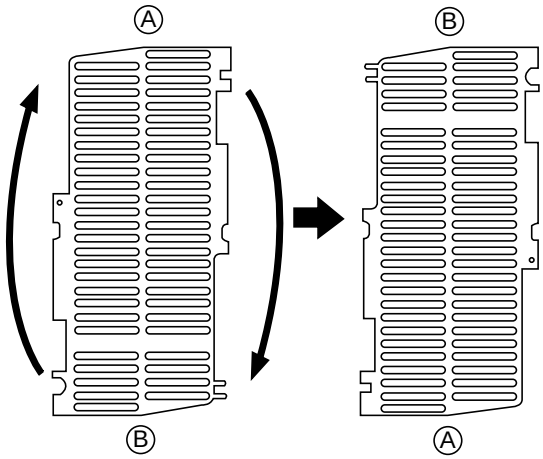
① Cut six portions on the Under Base by nipper and remove a Cover.



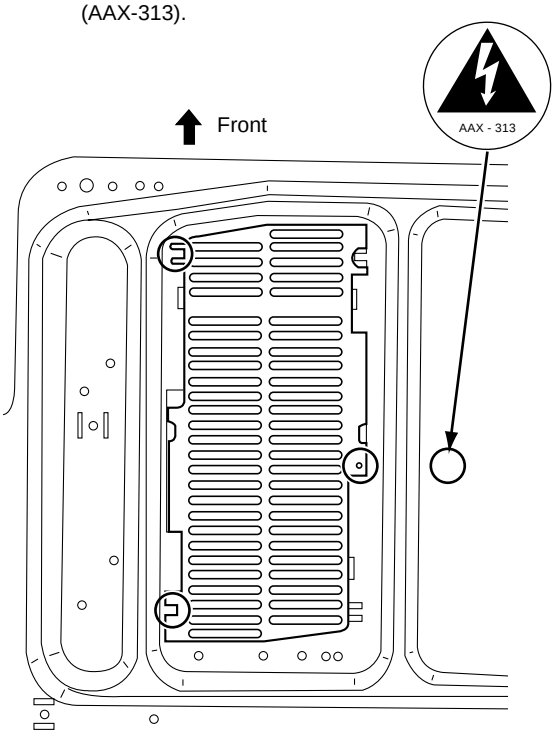
② Diagnose the P-PACK (IC301, IC302 and IC303).



③ Turn the Cover.

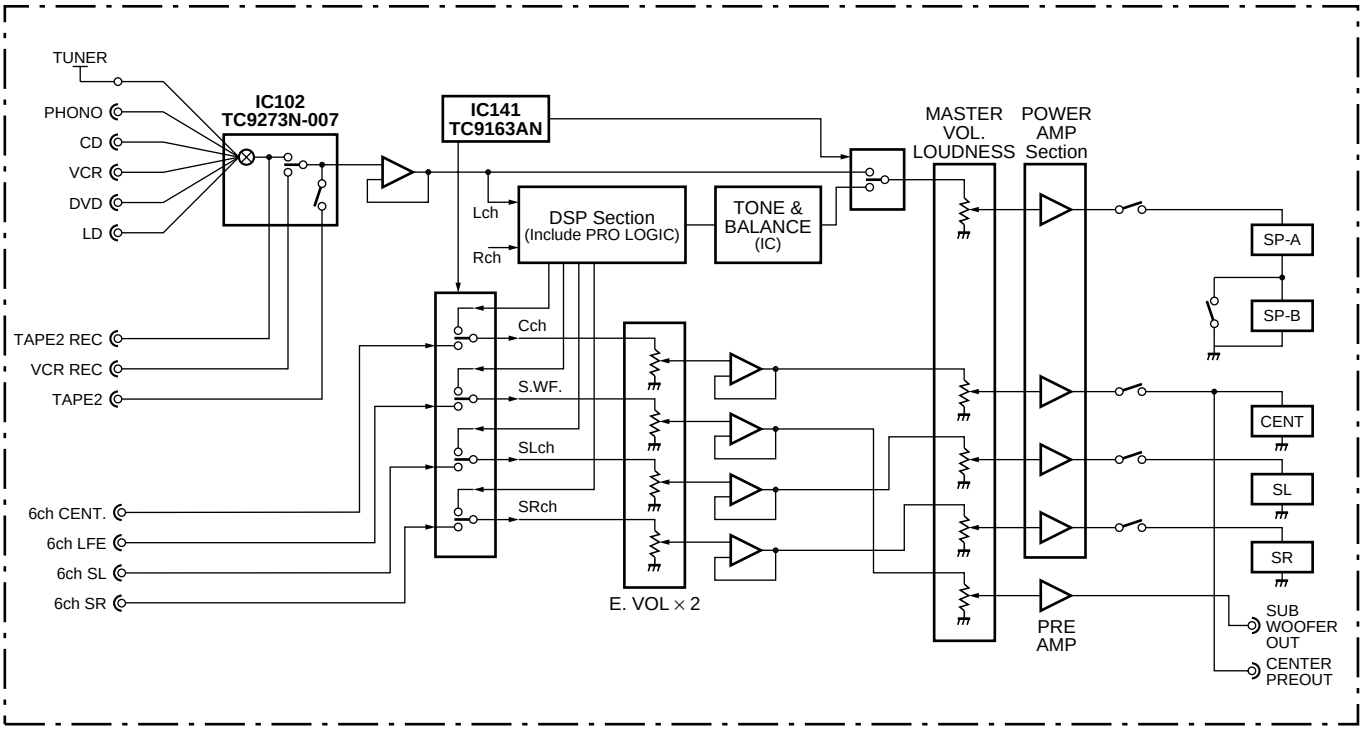


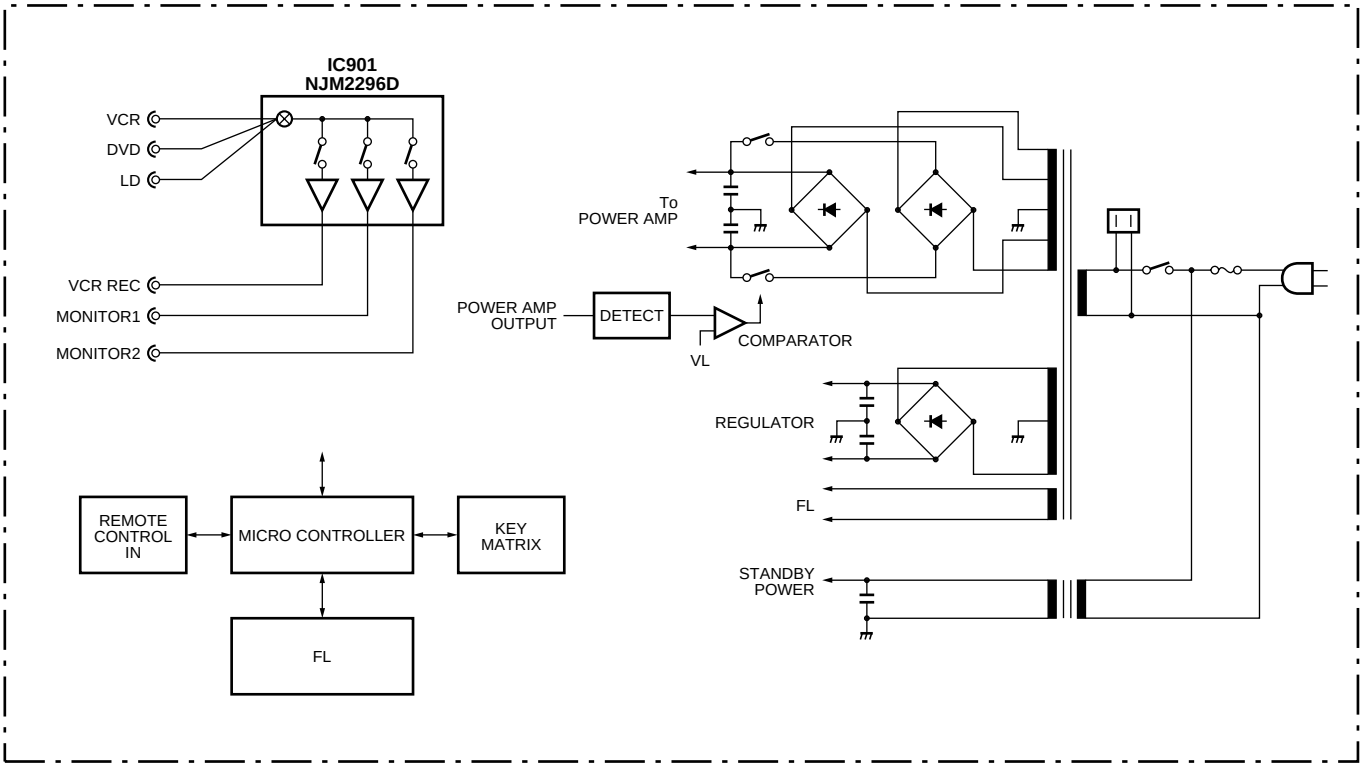
④ Fix the Cover with the three screws (BBZ30P080FMC) and stick the UL Caution Card (AAX-313).



CAUTION :
After performing the above operation, be sure to stick the UL caution card(Part No. : AAX-313) to the prescribed position. (It is required by the UL regulations.)

7.3 BLOCK DIAGRAM



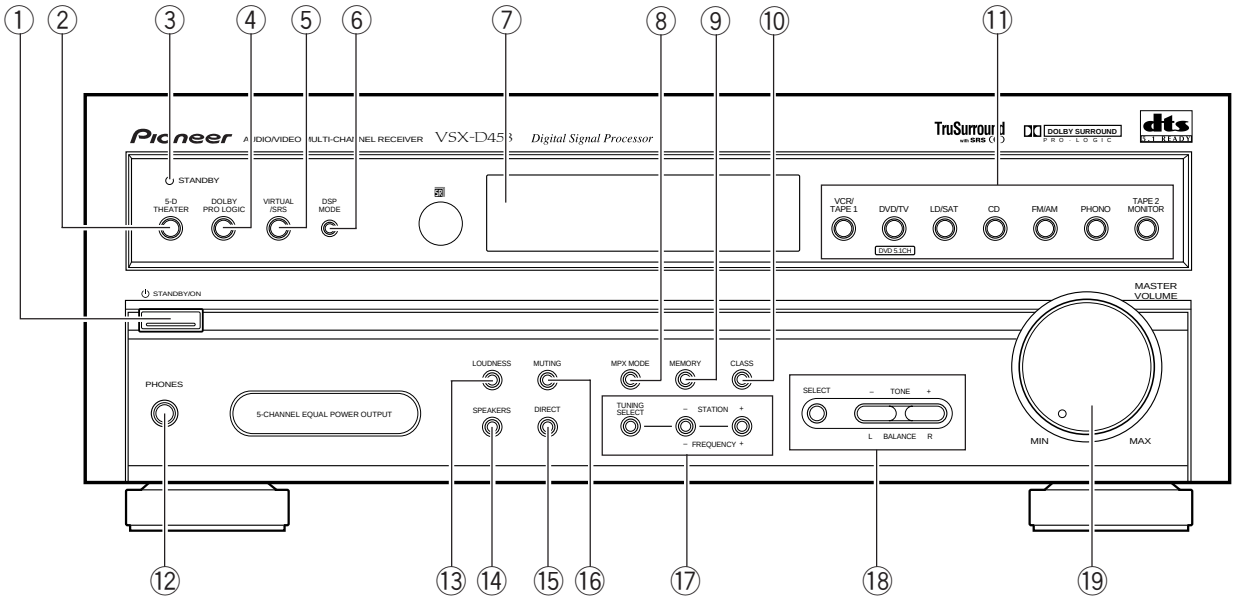


8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

Front panel

- The size of characters in the figure may different from that on the actual product.



① **⏻ (power) STANDBY/ON button**

② **5-D THEATER button**

③ **STANDBY indicator**

④ **DOLBY PRO-LOGIC button**

⑤ **VIRTUAL/SRS button**

⑥ **DSP MODE button**

⑦ **Display**

⑧ **MPX MODE button**
Use to switch the auto stereo/monaural mode for receiving FM broadcasts.
When the received broadcast signal is weak, press this button to set the monaural mode.

⑨ **MEMORY button**

⑩ **CLASS button**

⑪ **Function buttons**

⑫ **PHONES jack (Headphone terminal)**

⑬ **LOUDNESS button**
Press this button when the volume is low to raise the low and high range levels so that the sound can be heard more easily.

⑭ **SPEAKERS button**
Use to switch the A and B speaker systems.

⑮ **DIRECT button**
Use to play back sound without going through the tone and balance control circuits. DOLBY PRO LOGIC, DSP MODE, 5-D THEATER, DOLBY VIRTUAL/SRS and LOUDNESS also turn off.

⑯ **MUTING button**
Press to mute the volume.

⑰ **TUNING SELECT, STATION (–, +) and FREQUENCY (–, +) buttons**
TUNING SELECT:
Use to select the STATION mode and FREQUENCY mode when operating the tuner.
STATION (–, +):
Use to select the station number when operating the tuner.
FREQUENCY (–, +):
Use to select the frequency when operating the tuner.

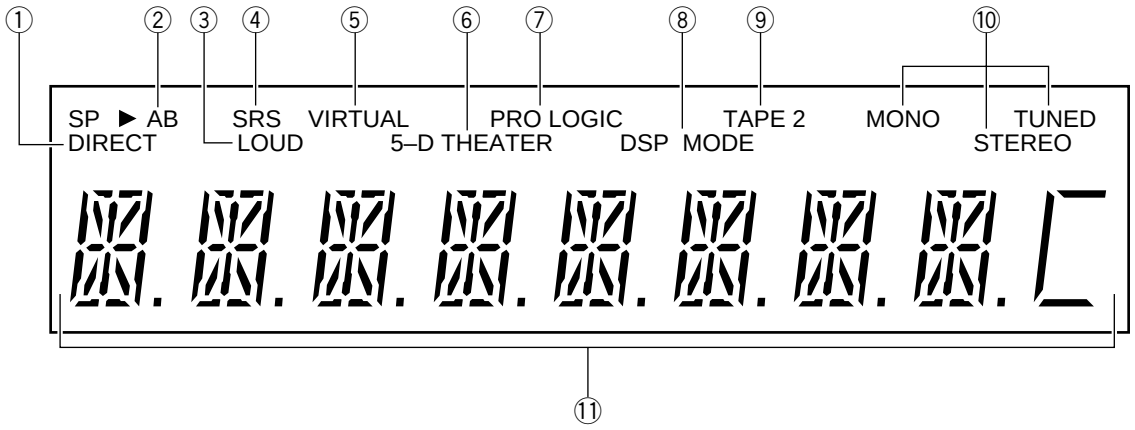
⑱ **SELECT, TONE (–, +) and BALANCE (L, R) buttons**
SELECT:
Use to select the TONE (TREBLE, BASS) and BALANCE control.

→ TREBLE control → BASS control → BALANCE control ←

TONE (–, +):
Use to adjust tone.
BALANCE (L, R):
Use to adjust volume balance.

⑲ **MASTER VOLUME**

Display



① **DIRECT indicator**
Lights when DIRECT is ON.

② **SP (Speaker) A, B indicator**
The indicator of the speaker system (A, B) selected will light.

③ **LOUD (Loudness) indicator**
Lights when LOUDNESS is ON.

④ **SRS indicator**
Lights when SRS 1 or SRS 2 (one of the virtual surround mode) is selected.

⑤ **VIRTUAL indicator**
Lights when DOLBY VIRTUAL is selected.

⑥ **5-D THEATER indicator**
Lights in the 5-D THEATER mode.

⑦ **PRO LOGIC indicator**
Lights when Dolby Pro Logic is selected.

⑧ **DSP MODE indicator**
Lights when DSP MODE is selected.

⑨ **TAPE 2 indicator**
Lights when TAPE 2 MONITOR is ON.

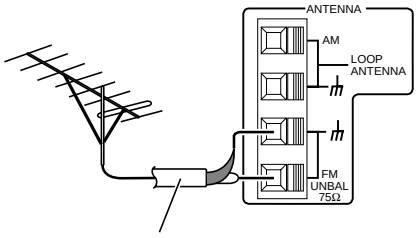
⑩ **TUNER indicator**
MONO:
Lights when the monaural mode is set using the MPX MODE button.
STEREO:
Lights when stereo broadcasts are received during auto stereo mode.
TUNED:
Lights when broadcasts are being received.

⑪ **CHARACTER display**

CONNECTING DEVICES

When connecting or changing equipment, be sure to turn OFF the POWER switch, and disconnect the power cord from the wall outlet.

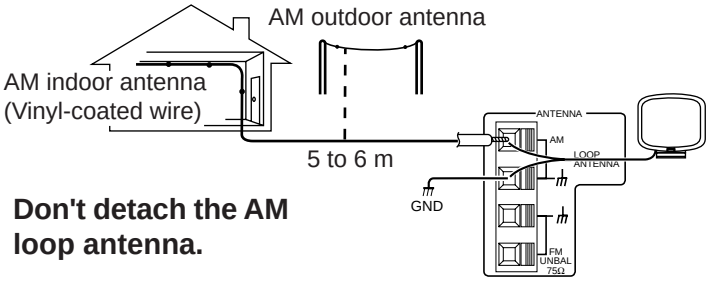
■ For better reception of signals, use an FM external antenna.



75 Ω coaxial cable

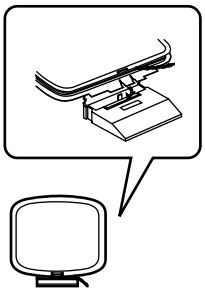
■ When AM broadcast reception is poor

Connect a 5 to 6 meter long vinyl-coated wire to the AM antenna. If possible, draw horizontally outdoors to achieve better reception.

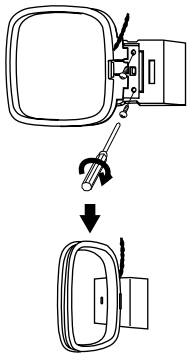


Don't detach the AM loop antenna.

■ Assembling the AM loop antenna



■ When attached onto a wall, etc.



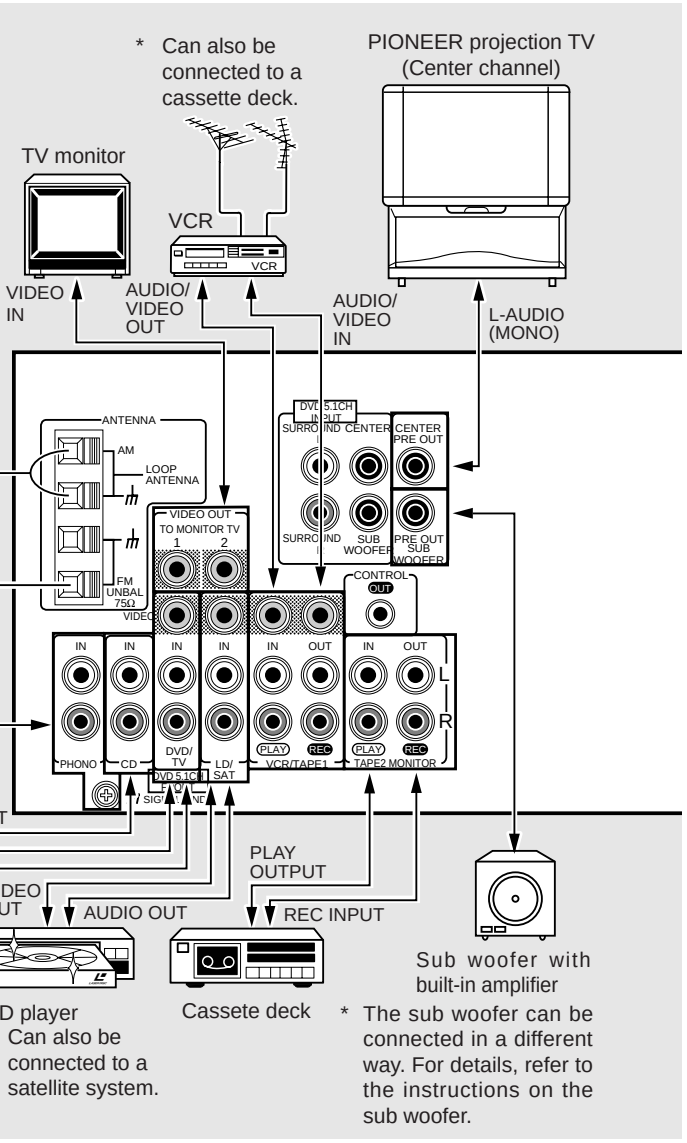
Face towards the direction with the best reception.

Stretch out the antenna fully and secure onto the wall using pins.

FM antenna

SIGNAL GND is used to decrease the noises when an analog player, etc. is connected. This is not a ground for safety.

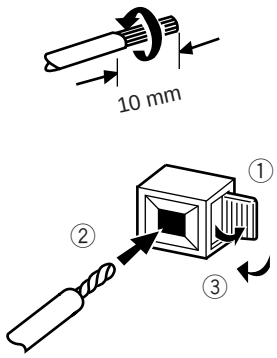
* Can also be connected to a cassette deck.



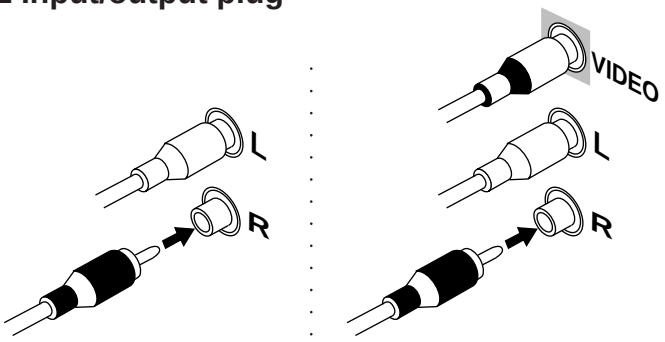
* Can also be connected to a satellite system.

* The sub woofer can be connected in a different way. For details, refer to the instructions on the sub woofer.

■ Antenna terminal

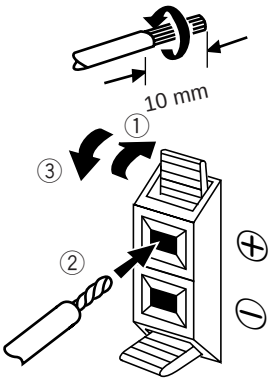


■ Input/output plug

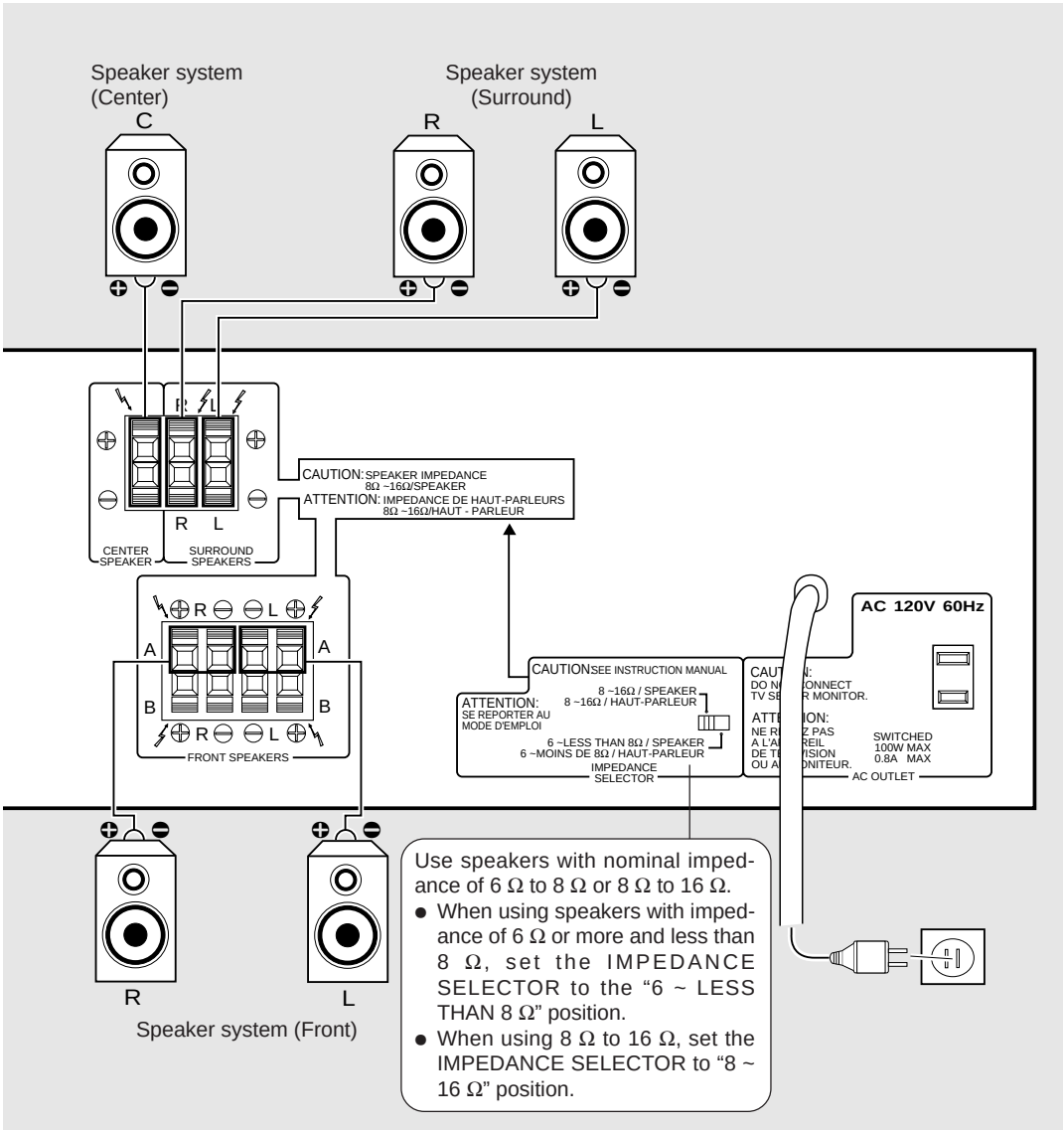


Connect the white plug to L, red plug to R, and yellow plug to VIDEO. Be sure to insert completely.

■ Speaker terminal



- The size of characters and terminal positions in the figures may differ from those on the actual product.


Speaker system (Center)
C
Speaker system (Surround)
R
L
CAUTION: SPEAKER IMPEDANCE 8Ω ~16Ω/SPEAKER
ATTENTION: IMPEDANCE DE HAUT-PARLEURS 8Ω ~16Ω/HAUT - PARLEUR
R L
CENTER SPEAKER
SURROUND SPEAKERS
A
B
FRONT SPEAKERS
CAUTION SEE INSTRUCTION MANUAL
ATTENTION: SE REPORTER AU MODE D'EMPLOI
8 ~16Ω / SPEAKER
8 ~16Ω / HAUT-PARLEUR
6 ~LESS THAN 8Ω / SPEAKER
6 ~MOINS DE 8Ω / HAUT-PARLEUR
IMPEDANCE SELECTOR
AC 120V 60Hz
SWITCHED 100W MAX 0.8A MAX
AC OUTLET
R
L
Speaker system (Front)
Use speakers with nominal impedance of 6 Ω to 8 Ω or 8 Ω to 16 Ω.
● When using speakers with impedance of 6 Ω or more and less than 8 Ω, set the IMPEDANCE SELECTOR to the "6 ~ LESS THAN 8 Ω" position.
● When using 8 Ω to 16 Ω, set the IMPEDANCE SELECTOR to "8 ~ 16 Ω" position.

AC OUTLET

[SWITCHED 100 W (0.8 A) MAX]

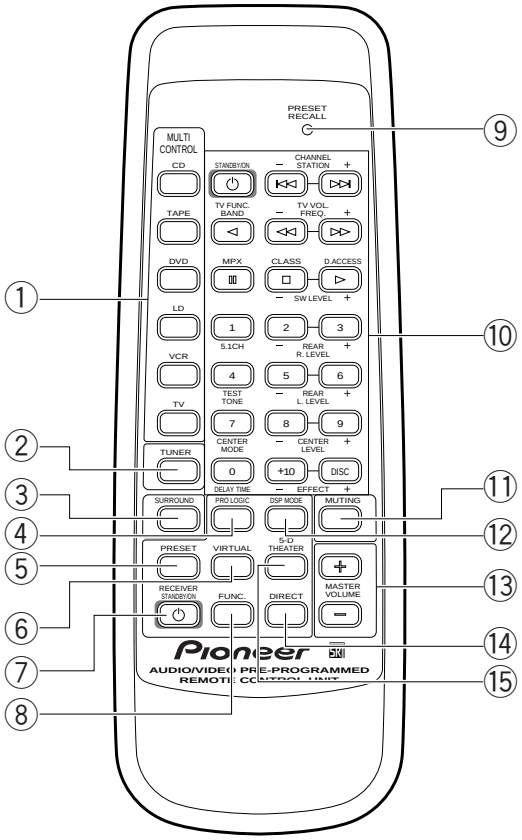
Power supplied through this outlet is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W (0.8 A).

Memo

- This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g., when on vacation.
- Do not connect appliances with high power consumption such as heaters, irons, or television sets to this AC OUTLET in order to avoid overheating and fire risk. This can also cause the receiver to malfunction.

CAUTION:
DO NOT CONNECT A MONITOR OR TV SET TO THIS UNIT'S AC OUTLET.

Remote control unit



① **MULTI CONTROL function buttons**
Use to set and operate the MULTI CONTROL.

② **TUNER button**
Use to set the TUNER function.

③ **SURROUND button**
Press when performing surround operations.

④ **PRO LOGIC button**
Use to turn ON/OFF the DOLBY PRO LOGIC surround.

⑤ **PRESET button**
To preset other brand devices, press any one of the MULTI CONTROL function buttons together with this button.

⑥ **VIRTUAL button**
Use to switch the VIRTUAL/SRS mode.

⑦ **RECEIVER ⏻ (power) STANDBY/ON button**
Use to switch the RECEIVER power to ON or STANDBY.

⑧ **FUNC. button**
Switches the function.

⑨ **PRESET RECALL indicator**

⑩ **[Tuner Operations]**
⏻ (power) STANDBY/ON, STATION –/+, BAND, FREQ –/+, MPX, CLASS, D.ACCESS and number buttons
[TV Operations]
⏻ (power) STANDBY/ON, CHANNEL –/+, TV FUNC., TV VOL. –/+ and number buttons
[CD Operations]
⏻ (power) STANDBY/ON, ⏮, ⏭, ◄◄, ►►, ❚❚, ■, ►, DISC, +10 and number buttons
[CASSETTE DECK Operations]
⏻ (power) STANDBY/ON, ◄, ◄◄, ►►, ❚❚, ■ and ► buttons
[DVD and LD Operations]
⏻ (power) STANDBY/ON, ⏮, ⏭, ◄◄, ►►, ❚❚, ■, ►, DISC, +10 and number buttons
[VCR Operations]
⏻ (power) STANDBY/ON, CHANNEL –/+, ◄◄, ►►, ❚❚, ■ and ► buttons
[When setting surround (operations)]
5.1 CH: Use to turn ON/OFF the 5.1 CH INPUT mode.
TEST TONE: When turned ON (while in surround mode), volume balance adjustment signals are output in order from the speakers and can be adjusted.
CENTER MODE: Switches the center mode (only when setting the Dolby Pro Logic).
DELAY TIME: Use to set the delay time (only when setting the Dolby Pro Logic).
SW LEVEL –/+: Adjusts the sub woofer level.
REAR R. LEVEL –/+: Adjusts the rear level (R channel).
REAR L. LEVEL –/+: Adjusts the rear level (L channel).
CENTER LEVEL –/+: Adjusts the center level.
EFFECT –/+: Adjusts DSP effects.

⑪ **MUTING button**
Press to mute the volume.

⑫ **DSP MODE button**
Switches the surround effects.

⑬ **MASTER VOLUME –/+ buttons**
Use to adjust the volume.

⑭ **DIRECT button**
Use to play back sound without going through the tone and balance control circuits. DOLBY PRO LOGIC, DSP MODE, 5-D THEATER, DOLBY VIRTUAL/SRS and LOUDNESS also turn off.

⑮ **5-D THEATER button**
Use to turn ON/OFF the 5-D THEATER mode.

8.2 SPECIFICATIONS

Amplifier section

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09 % total harmonic distortion (front).**

Continuous Power Output
- Front ..... 100 W + 100 W (1kHz, 0.8 %, 8 Ω)
- Center ..... 100 W (1kHz, 0.8 %, 8 Ω)
- Rear ..... 100 W + 100 W (1kHz, 0.8 %, 8 Ω)

Input (Sensitivity/Impedance)
- PHONO MM ..... 2.8 mV/47 kΩ
- LD/SAT, CD, VCR/TAPE 1, TAPE 2
- DVD/TV ..... 200 mV/47 kΩ

Phono Overload level (T.H.D. 0.1 %, 1kHz)
- PHONO MM ..... 100 mV

Frequency Response
- PHONO MM ..... 20 Hz to 20,000 Hz ± 0.3 dB
- LD/SAT, CD, VCR/TAPE 1, TAPE 2
- DVD/TV ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
- VCR/TAPE 1 REC, TAPE 2 REC ..... 200 mV/2.2 kΩ

Tone Control
- BASS ..... ± 8 dB (100 Hz)
- TREBLE ..... ± 8 dB (10 kHz)
- LOUDNESS ..... + 7 dB/+ 6 dB (100 Hz/10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
- PHONO MM ..... 72 dB
- LD/SAT, CD, VCR/TAPE 1, TAPE 2, DVD/TV ..... 96 dB

Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]
- PHONO MM ..... 75 dB
- LD/SAT, CD, VCR/TAPE 1, TAPE 2, DVD/TV ..... 79 dB

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.
** Measured by Audio Spectrum Analyzer.

VIDEO Section

Input (Sensitivity/Impedance)
- VCR, DVD/TV, LD/SAT ..... 1 Vp-p/75 Ω

Output (Level/Impedance)
- VCR REC, MONITOR TV ..... 1 Vp-p/75 Ω

Frequency Response
- LD/SAT, VCR, DVD/TV
- → MONITOR ..... 5 Hz to 7 MHz $^{+0}_{-3}$ dB

Signal-to-Noise Ratio ..... 55 dB
Cross Talk ..... 55 dB

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FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono:13.2 dBf, IHF (1.3 µV/75 Ω)
50 dB Quieting Sensitivity ..... Mono: 20.2 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion ..... Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (±1) dB
Antenna Input ..... 75 Ω unbalanced

AM Tuner Section

Frequency Range ..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 µV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

Miscellaneous

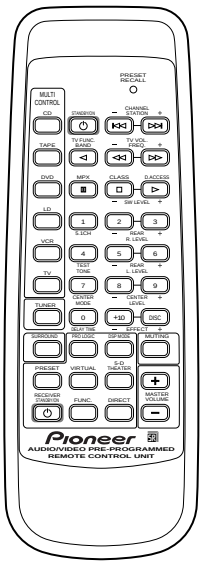
Power Requirements ..... AC 120 V, 60 Hz
Power Consumption ..... 280 W
Power consumption in standby mode ..... 2.5 W
AC Outlet
- SWITCHED ..... 100 W (0.8 A) MAX

Dimensions ..... 420 (W) × 158 (H) × 374 (D) mm
Weight (without package) ..... 9.0 kg

Furnished Parts

FM Antenna 1
AM Loop Antenna 1
Dry Cell Batteries [size "AA" (IEC R6P)] 2
Remote Control Unit 1
Operating Instructions 1
Warranty card 1

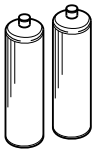
NOTE:
Specifications and the design are subject to possible modifications without notice, due to improvements.



Remote control unit :
AXD7207 (CU-VSX153)

FM antenna : ADH7004

AM loop antenna : ATB7009



Dry cell battery
(size “AA” IEC R6P) × 2